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Does Assurance Matter? Evidence from U.S. Financial Institutions

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Does Assurance Matter? Evidence from U.S. Financial Institutions

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Abstract

In this paper, I explore the determinants and consequences of the level of assurance that a bank selects. Using a sample of small, privately held U.S. (United States) financial institutions (banks), I find that two differing types of banks are more likely to purchase more assurance. First, larger banks that are experiencing growth purchase relatively more assurance than other banks. Second, more complex banks with lower returns on assets, losses, and higher leverage are more likely to purchase an audit than a lower level of assurance. This may indicate the influence of regulators on banks' assurance purchasing decisions. I also find that financial reporting quality is better when banks purchase higher levels of assurance. Specifically, banks that purchase an audit of their financial statements have lower levels of discretionary loan loss provisions, are less likely to just meet or beat prior year earnings using discretion, and are less likely to just avoid a loss using discretion. Banks that purchase directors' examinations have lower levels of discretionary loan loss provisions and are less likely to just meet or beat prior year earnings using discretion. In addition, I find some evidence that suggests that banks that purchase reviews and compilations also have better financial reporting quality than banks that purchase no external assurance services. My results should be of interest to regulators and other stakeholders as they consider the costs and benefits of audits in privately held financial institutions.

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Dedication

This dissertation is dedicated to my husband, Brian Edward Douglass, and my son, Soren David Douglass. You are my world.

Table of Contents

List of Tables and Figures

I. Introduction

The 2008 financial crisis highlighted the critical role of financial institutions (banks) in the health of the United States (U.S.) economy. Although some banks are arguably "too big to fail," community banks comprise 98 percent of banks in the U.S., with more than 6,000 institutions, according to the Independent Community Bankers of America. As of 2011, most of these banks have total assets under $500 million (78 percent) and are privately held (84 percent)(FDIC 2012). These banks are particularly important in certain sectors of the economy. Start-ups, farms, and small businesses all frequently rely on community banks rather than on national banks for lending services (Kahn et al. 2003). In the U.S., all banks are required by the Federal Financial Institutions Examination Council to file a Quarterly Report of Condition and Income, or call report, regardless of whether the bank is publicly traded or privately held. The call report contains a wealth of financial and other information at a very detailed level, giving researchers insight into a relatively unexamined portion of the U.S. economy: privately held banks.

Unlike publicly traded companies or large banks, privately held U.S. banks with less than $500 million in total assets are not required by federal regulations to have an independent audit of their financial statements.[1] However, all banks are required to disclose the level of assurance they purchase on an annual basis. This level of assurance disclosure has nine options, ranging from "no external assurance work" to an "independent audit of the bank in accordance with generally accepted auditing standards by a certified public accounting firm which submits a

[1] Some states mandate a minimum level of assurance, such as a directors' examination. Other states have a lower threshold for an audit than the federal level of $500 million. Because of this, I eliminate all observations from states where more than 95 percent of observations are audits at the bank or holding company level from my determinants tests.

report on the bank." To my knowledge, this paper is the first to examine the determinants and consequences associated with the levels of assurance purchased by privately held banks. Given the importance of the banking sector to the strength of the U.S. economy, it is important to understand the role of assurance and the outcomes associated with the varying levels of assurance banks select when given the choice.

Outside of regulatory requirements, the assurance provided by an independent financial statement audit has potential economic value. Prior literature generally examines the value of an audit in the setting of non-banking privately held companies. The literature considers the choice to purchase an audit a signal of quality that allows high quality companies to differentiate themselves (Jensen et al. 1976; Melumad and Thoman 1990). Several studies find that privately held companies with independently audited financial statements have reduced interest rates on bank loans (Blackwell et al. 1998; Cassar and Minnis 2011; Kausar et al. 2015). Cassar and Minnis (2011) find that audited financial statements are more informative than unaudited statements and lenders place more weight on audited financial statements. Companies that have audited financial statements are also less likely to be denied credit (Allee and Yohn 2009).

Because prior literature has not examined assurance choice in banks, I first investigate the determinants of the level of assurance a bank purchases. Based on prior literature, I expect larger banks, those with more risk, and higher leverage to purchase higher levels of assurance (Chow 1982; Hay and Davis 2004). Banks are regularly examined by state and federal regulators, who rate the banks based on their risk profile, managerial capability, and earnings. If a bank is performing poorly, it is subject to additional regulatory scrutiny and regulators may recommend that the bank purchase an audit. I therefore expect riskier banks, those with losses and negative changes in ROA and Tier 1 capital ratio to have higher levels of assurance.

The relation between assurance and financial reporting quality of privately held banks has not been examined in the literature. In particular, the role of assurance levels other than an audit have rarely been examined in archival accounting literature. I examine whether the purchase of assurance services (e.g. audit, bank directors' examination[2], review, or compilation) is associated with financial reporting quality. The ownership of privately held banks is less diffuse than that of publicly traded banks, and therefore shareholders of private banks are more likely to participate in bank management than those of publicly traded banks (Beatty et al. 2002). This results in lower information asymmetry for the shareholders of privately held banks than shareholders of publicly traded companies. This does not preclude the management of private banks from manipulating its earnings, however. Beatty et al. (2002) find that, while privately held banks manipulate earnings to a lesser extent than publicly traded banks, they have significantly fewer small negative changes in earnings than expected. They also find that abnormal loan loss provisions are more income increasing for private banks with small decreases in earnings than private banks that have small increases in earnings (Beatty et al. 2002).

Private banks that manage their earnings are likely concerned with regulatory and creditor scrutiny of financial statements rather than that of shareholders (Kanagaretnam et al. 2003). Bank regulators are specifically concerned with "the level and trend of earnings" and poor

[2] A bank directors' examination is an agreed upon procedures engagement wherein the certified public accountant or state auditor performs a variety of procedures and reports back to the board of directors and bank management on their findings. No opinion is issued and the procedures performed can vary from bank to bank and year to year. In 2015, Eide Bailly, a regional accounting firm with banking expertise, advertised directors' examination procedures as "including loan confirmations, reconciliations of subsidiary ledgers, confirmations on correspondent bank accounts, reviews to reconcile items on bank statements, allowance for loan loss methodology, high level analytics on income statements, operational year-over-year reviews, employee account reviews, and additional procedures." https://www.eidebailly.com/industries/financial-institutions/audit-assurance/directors-examination/

financial performance is sufficient to warrant additional regulatory oversight and potential FDIC bank closure.[3] Banks also seek creditors in the form of large uninsured certificates of deposit, but the market for uninsured deposits prices bank risk (Hannan and Hanweck 1988). Therefore, banks that keep their perceived risk of default low can borrow at a lower rate. In addition, banks with smoother earnings and higher capital have less frequent regulatory audits (Kanagaretnam et al. 2003). Banks therefore have several incentives to smooth earnings and avoid losses. However, a bank discovered to be manipulating its earnings would be at risk for increased regulatory scrutiny, fines, and penalties. Consistent with earnings manipulation being an important regulatory issue for privately held banks, regulators have taken a more punitive approach to regulatory non-compliance since the financial crisis, with low tolerance for non-compliance.[4]

I test the association between level of assurance and three proxies for earnings management: discretionary loan loss provisions, managing earnings to just meet or beat prior year's earnings, and managing earnings to avoid a loss. Numerous studies have found that banks use the loan loss provision to manage or smooth earnings (Beatty et al. 1995; Beatty and Harris 1998; Beatty et al. 2002; Kanagaretnam et al. 2003; Jin et al. 2011). I expect that higher levels of assurance will be associated with lower levels of discretionary loan loss provisions because the additional scrutiny by external certified public accountants constrains the ability of managers to use accruals to manage earnings. I also expect that the propensity to meet or beat prior year earnings or avoid a loss using discretion will be negatively associated with higher levels of assurance.

[3] FDIC Uniform Financial Institutions Rating System
https://www.fdic.gov/regulations/laws/rules/5000-900.html
[4] http://www.bakertilly.com/insights/regulatory-non-compliance-is-now-a-financial-matter/

Using a sample of 81,358 bank-year observations from 2000 through 2012, I find that there are two types of banks that purchase higher levels of assurance than other banks. First, more complex banks with poorer financial performance (loss companies and those with lower levels of ROA) and newer banks are more likely to have higher levels of assurance on average. These findings suggest that regulatory pressure may contribute to the audit decision for many banks that are not required by statute to have an audit. This is because banks with poor financial performance are subject to greater regulatory scrutiny and pressure to have an independent audit of the financial statements. Second, larger banks that are experiencing growth are more likely to purchase higher levels of assurance than other banks. This suggests that well managed, growing banks may purchase more assurance in order to lessen regulatory scrutiny and obtain additional uninsured deposits (Kanagaretnam et al. 2003; Lo 2015).

In my tests of financial reporting quality outcomes, I find that higher levels of assurance are generally associated with lower levels of discretionary loan loss provisions and a lower probability of just meeting or beating prior year earnings using discretion. Banks receiving a review or compilation, a bank directors' examination, or an audit are significantly less likely to manage earnings using the discretionary loan loss provision than banks that receive no assurance. Banks with an audit or directors' examination are significantly less likely to just meet or beat prior year earnings using discretion than banks that purchase no assurance. I find no evidence that banks purchasing a review or compilation are less likely to just meet or beat earnings than banks that purchase no assurance. I find some evidence of an association between the level of assurance purchased by a bank and its probability of just avoiding a loss using discretion. Banks that purchase audits are marginally less likely to just avoid a loss using discretion. This finding may indicate that the positive assurance provided by an audit, rather than the negative assurance

provided by a directors' examination or review, is more successful at constraining management's propensity to manage earnings to meet certain targets. Taken together, my results indicate that higher levels of assurance are associated with better financial reporting quality, even in an environment that is very highly regulated.

To date, the accounting literature on the value of an audit has primarily focused on nonbanking companies, ignoring a key component of our economy that has a very different regulatory environment. In addition, the value of assurance other than an audit has rarely been examined. Banking literature has primarily focused on audits of publicly traded banks, rather than the variation of assurance that is available to private banks. My findings provide evidence that audits are associated with better financial reporting quality than other types of assurance, even in the highly regulated bank environment. Banks that purchase directors' examinations and, in some cases, reviews and compilations also have better financial reporting quality than banks that purchase no assurance. These findings should be of interest to financial institutions, regulators, and others interested in audit choice and the effect of assurance on financial reporting quality. In particular, bank regulators may be interested in my results that show that banks that purchase audits have better financial reporting quality than those that purchase directors' examinations, the next most common level of assurance purchased by banks.

The remainder of the paper proceeds as follows: in Section 2, I discuss the auditing requirements for banks, review prior literature, and develop my hypotheses. Section 3 contains the research design, sample, and results for my determinants test. Section 4 contains the main research design, sample, and results. Section 5 contains additional analyses and Section 6 concludes.

II. Background, Prior Literature, and Hypothesis Development

A. Voluntary Assurance

While most publicly traded companies in the United States must purchase an audit due to Securities and Exchange Commission (SEC) regulations, privately held companies in the United States are generally not required to purchase an audit. However, there are many reasons why a private company might choose to have an audit even when one is not required. Audits improve the quality of financial statements and the choice to have an audit is a signal that allows high quality companies to differentiate themselves (Jensen et al. 1976; Chow 1982; Melumad and Thoman 1990; Hay and Davis 2004).

Many studies of voluntary assurance in the literature focus on the cost of debt in private companies and view banks as monitors rather than as companies that themselves might purchase an audit (Blackwell et al. 1998; Cassar and Minnis 2011; Kim et al. 2011). Monitoring and bonding is perhaps the most frequent reason cited in the literature for privately held companies to purchase an audit. Auditors mitigate the risks associated with high agency costs (Jensen et al. 1976; Anderson et al. 1993; Hope et al. 2012) and can lower the cost of debt (Blackwell et al. 1998; Mansi et al. 2004; Allee and Yohn 2009; Cassar and Minnis 2011; Kim et al. 2011). Blackwell et al. (1998) find that small private companies receive lower interest rates on debt when they purchase an audit. They also find that audited companies in their sample are riskier than unaudited companies, which they suggest means that riskier companies can purchase a lower interest rate via an independent audit of their financial statements. Related to Blackwell et al. (1998), Cassar and Minnis (2011) find that audited companies have a lower cost of debt because audited accruals are better predictors of future cash flows than the accruals of companies that are not audited. They also find that lenders place more weight on audited financial information than they do on unaudited financial information. When audits are made voluntary for

some companies in the United Kingdom, companies that choose to no longer receive audits are penalized with downgrades to their credit rating (Lennox and Pittman 2011). Taken together, this stream of literature suggests that audits serve as a monitoring tool for parties outside of the company such as creditors and credit rating agencies.

Auditors are perceived as having "deep pockets," particularly larger audit firms, and outside investors and stakeholders may demand an audit or a high quality audit as a way of insuring themselves against potential losses. General evidence in support of this theory is common in the accounting literature. Audit fees depend both on the actual work performed and the insurance value of the auditor's wealth in the case of an audit failure (Dye 1993). Menon and Williams (1994) find that investors price the right to recover losses from the auditor as a component of the stock price. Companies with higher agency costs are more likely to hire a larger auditor and the stock market responds more favorably to a switch to a large auditor than to a switch to small auditor (Lennox 1999).

Consistent with the various benefits of assurance, prior work provides evidence suggesting that a large number of companies purchase assurance, even when they are not required to do so. A study in the United Kingdom in the lead up to the change in that country's audit thresholds finds that 63 percent of small companies would choose to have an audit even if they were exempt from the requirement (Collis, Jarvis, and Skerratt 2004). Small private companies in Finland which experience financial distress are more likely to have a financial statement audit (Niemi et al. 2012). In a study of New Zealand companies with the choice to have an audit, approximately 80 percent choose to be audited (Hay and Davis 2004). They also find that larger companies and those with a higher proportion of salary expense as a proportion of revenue and a higher proportion of debt as a percentage of assets are more likely to obtain an

audit. Those same companies are also more likely to select larger audit firms and to select chartered accountants to perform the audit.

B. Banking Literature

Several studies have taken advantage of the unique setting and wealth of data available for both public and private banks as an opportunity to directly compare publicly and privately held entities. Beatty et al. (2002) find that publicly traded banks are more likely than privately held banks to manage earnings to avoid an earnings decline. Publicly traded banks are also more likely to use the loan loss provision to manipulate earnings and tend to have longer strings of earnings increases. The authors attribute this difference to publicly traded bank shareholders' reliance on earnings-based performance evaluations. In contrast, Nichols et al. (2009) find that there is a greater demand for conservatism in publicly traded banks than in privately held banks, due to higher agency costs. They show that publicly traded banks are timelier in their recognition of losses than privately held banks, and tend to have larger and timelier loan losses.

Other bank specific audit research has examined the impact that different types of auditors, such as banking specialists or Big 4 audit firms, have on the financial reporting quality of banks. Specialist auditors moderate bank managers' use of the loan loss provision to smooth earnings and are particularly more effective at constraining income increasing earnings management (DeBoskey and Jiang 2012). Jin et al. (2011) find that, among troubled banks, those that are audited by Big 4 auditors and specialist auditors are less likely to fail than other banks.

Two studies have specifically examined the role that an audit plays in privately held banks. Lo (2015) finds that audits allow small banks, which are more opaque than other banks (Kashyap and Stein 2000), to better attract loanable funds in the form of large uninsured deposits. Using a sample of small private banks with assets under $500 million, he finds that

banks that receive an audit have access to more uninsured financing (large certificate of deposits) than banks that do not receive an audit. The audit reduces uncertainty about a bank's financial position and this increase in "reporting credibility" allows banks to restrict lending less during liquidity shortages caused by changes in monetary policy (Lo 2015).

Using a sample of privately held banks both above and below the asset threshold for a required audit, Barton et al. (2015) find that banks that receive either voluntary or mandatory audits pose less default risk to investors. The authors theorize that financial statement audits lower operational risk and reduce agency costs and that banks which either choose or are required to have an audit are therefore at a lower risk of failure than banks that do not have an audit performed. Taken together, these studies suggest that audits are beneficial for privately held banks. However, neither paper directly examines the relation between financial reporting quality and audits nor do they examine the other levels of assurance a private bank can select. I extend both the voluntary assurance literature and the banking literature by examining the factors that affect assurance levels selected by banks and the effect of assurance on bank financial reporting quality.

C. Background on the Banking Setting

Due to the importance of the banking sector for the US economy, banks are subject to more regulatory scrutiny at the state and federal level than most other industries. There are 12 Federal Reserve Districts within the Federal Reserve System, each of which is responsible for overseeing banks within their district. If a bank is not a member of the Federal Reserve, its national regulator is either the Federal Deposit Insurance Corporation (FDIC) or the Office of the Comptroller of the Currency (OCC), depending on whether the bank is state-chartered (FDIC) or nationally chartered (OCC). Most commercial banks have mandated on-site examinations by

federal regulators at least annually (Hirtle and Lopez 2002). Banks are also subject to regulation at the state level by either the attorney general's office or another agency within the state government. State regulators also conduct on-site examinations. Though the duration between examinations varies depending on the state, most states mandate on-site examination at least every 18 months. During on-site examinations, regulators review financial and detailed loan records and conduct staff interviews. Regulators determine compliance with all relevant banking regulations and assess the bank's risk using the CAMELS rating (further discussed below).

In addition to frequent on-site examinations, banks are also required to submit call reports on a quarterly basis to regulators. Call reports provide a wealth of financial information which is not typically available for privately held companies. Along with unaudited GAAP financial statements, the call report includes a number of additional disclosures designed to aid regulators in monitoring the banks, including detailed financial and loan information. Publicly traded banks are required to have annual financial statement audits at the bank or holding company level, however privately held banks are required to have a financial statement audit only if their total assets exceed $500 million. For the subset of banks that I examine, assurance is generally voluntary and the level of assurance varies widely among banks. In addition, some banks change the level of assurance they purchase from year to year. All banks must disclose the level of assurance they purchased during the previous year in the March 30 call report. For example, the highest level of assurance received in 2016 would be reported in the March 30, 2017 call report.

Banks must choose one of nine levels of assurance work performed in the previous year in the RCON6724 field of the call report. The instructions require banks to choose "the most comprehensive level of auditing work performed for the bank by independent external auditors

as of any date during" the previous year.[5] "Auditing work" is a misnomer because only the first two levels of assurance are independent financial statement audits. (See Appendix A for detailed descriptions of each level as well as instructions to bank managers.) The instructions help managers determine the level of assurance purchased by the bank using excerpts from the different report types. The first level is an independent audit of the bank's financial statements in accordance with GAAP by a certified public accounting firm. This level subjects the bank financial statements to the highest level of non-regulatory scrutiny. The second level is an independent audit of the bank holding company's financial statements by a certified public accounting firm, which results in consolidated bank and bank holding company financial statements.

The third level of assurance is an attestation on management's assessment of the effectiveness of internal controls over financial reporting (ICFR) by a certified public accounting firm. This attestation is the equivalent of Section 404(b) of the Sarbanes Oxley Act of 2002 but since all of the banks in my sample are privately held, there is no internal control assessment requirement associated with their financial statement audit. In practice, very few banks select this as the highest level of assurance received (1.47 percent of the total sample). Banks that choose to have an attestation on management's assessment of ICFR likely also choose to have an audit, if only for the efficiencies gained by performing both simultaneously.

The fourth level of assurance is a "directors' examination of the bank conducted in accordance with generally accepted auditing standards by a certified public accounting firm (may be required by state-chartering authority)." A directors' examination is an agreed upon procedures engagement where the accounting firm performs a series of procedures that are

[5] FDIC March 30, 2015 Report of Condition and Income, RCON 6724 Description.

designed and agreed on by the bank's board of directors. Some states (e.g., Nebraska, Louisiana, etc.) have regulated minimum procedures that a directors' examination must include, if the bank chooses to have a directors' examination. Other states (e.g., Idaho and West Virginia) require a directors' examination as the minimum level of assurance a bank can receive. Bank directors may also want the accounting firm to focus on the highest risk areas of the bank. This option is much less costly than a full audit, but it does not provide an opinion on the financial statements or any negative assurance. The fifth level of assurance is a directors' examination performed by other external auditors (i.e. not an independent certified public accounting firm). The directions to the call report indicate that the bank should respond with a five if the directors' examination is performed by "a consulting firm or another banking organization" rather than a certified public accounting firm.

The sixth level of assurance described on the call report is a review of the bank's financial statements by external auditors. A review generally consists of inquiries and analytical procedures. It provides limited, negative assurance that the accounting firm is not aware of any material modifications that must be made for the financial statements to be presented in accordance with generally accepted accounting principles, but no opinion is expressed about the financial statements as a whole. The seventh level of assurance is a compilation of the bank's financial statements by external auditors. A compilation does not provide any positive or negative assurance. The accounting firm assists bank management in producing the financial statements from the trial balance and ledgers.

The eighth level of assurance is "other audit procedures (excluding tax preparation work)." This level may include agreed upon procedures engagements that do not meet the requirements for a directors' examination in the state or other specific accounting or assurance

work performed by an external party. It does not include consulting or tax engagements. The ninth option is no external audit work. The bank would select this option if they did not engage a certified public accounting firm or other consulting firm to provide any of the previously discussed services during the year.

As described above, state and federal regulators regularly examine banks and may strongly encourage or require them to be audited. Federal bank regulators classify banks using the Uniform Financial Institutions Rating System (UFIRS), which is based on on-site examination results and a financial statement ratio analysis (FDIC 1997). This rating is commonly referred to as the CAMELS rating, an acronym for the six components of the UFIRS. Banks are rated from one (best) to five (worst) on their capital adequacy, assets, management capability, earnings, liquidity, and sensitivity to market and interest rate risk. Banks are required by the Board of Governors of the Federal Reserve System to hold a minimum amount of capital in reserve, based on the credit risk of the bank's assets, as well as off-balance sheet derivatives and other exposures. The most commonly emphasized capital ratio is Tier 1 capital, or core capital, which must be at least four percent to avoid bank closure and at least eight percent to be considered well capitalized.[6]

Banks with CAMELS ratings of three, four, or five may be required to have an audit of their financial statements and those with an overall rating of four or five are in serious danger of bank failure. CAMELS ratings are not made publicly available, due to the obvious risk of creating a panic or bank run if a bank has a poor rating or downgrade in rating. Prior literature has found that ROA is the best proxy for the management capability component of the CAMELS rating (DeYoung 1998) and other financial ratios can substitute for the other components of the

[6] https://www.fdic.gov/regulations/laws/rules/2000-4400.html

CAMELS rating, such as the Tier 1 capital ratio as a proxy for capital adequacy. In addition to the performance reasons that regulators may encourage an audit, *de novo* banks (those that have been registered with the FDIC for less than five years) are also strongly encouraged to purchase an audit of their financial statements.

In discussions with financial executives at several privately held banks, assurance decisions are generally made by the board of directors in discussion with bank management. Cost is a primary consideration in the choice of assurance level. In addition to cost considerations, each person also emphasized the importance of complying with the requests and suggestions of both federal and state regulators.

The choice of assurance level varies both between banks and within the bank over time. Some banks in my sample have the same level of assurance year after year, or continually increase their level of assurance. Other banks choose to have an audit every other year in order to save money and others cycle between other levels of assurance, such as a directors' examination and a compilation. As discussed in the descriptive statistics in Section III, the proportion of banks in each assurance category does not change significantly over my sample period.

D. Hypotheses

Collectively, prior work suggests that banks that purchase higher levels of assurance should have higher financial reporting quality. As discussed above, nonbank private companies that receive audits have outcomes that indicate higher financial reporting quality (i.e., lower interest rates)(Blackwell et al. 1998; Cassar and Minnis 2011; Lennox and Pittman 2011) and publicly traded banks that purchase higher quality audits have higher financial reporting quality

(Kanagaretnam et al. 2010).[7] Because audits have frequently been associated with higher financial reporting quality, my first hypothesis, stated in the alternative, is as follows:

H1: *Financial reporting quality is higher for privately held banks that purchase an audit than for banks that purchase no assurance over the financial statements.*

While audits have previously been associated with higher financial reporting quality in the literature, bank directors' examinations are a form of assurance that has not been previously examined. However, the purchase of an examination of the bank's financial statements and underlying records by an independent third party likely results in better financial reporting quality for those banks than banks that have no independent third party examine their financial statements. Stated in the alternative, my second hypothesis is as follows:

H2: *Financial reporting quality is higher for privately held banks that purchase a bank directors' examination than for banks that purchase no assurance over the financial statements.*

Reviews (negative assurance) have been found not to operate as a compensatory control for business owners in the same manner as audits (positive assurance) (Abdel-Khalik 1993). However, a review of the financial statements does require limited procedures to be performed by a third party accountant. I predict that banks that purchase reviews will have better financial reporting quality than banks that purchase no outside assurance at all. Specifically, my third hypothesis, stated in the alternative, is as follows:

[7] However, financial institutions are often excluded from many financial accounting and auditing research studies due to their highly regulated environment. The frequent and detailed scrutiny provided by state and federal regulators discussed above may mean that a voluntary audit of the financial statements does not affect financial reporting quality because banks are prevented by regulators from manipulating their financial performance.

H3: *Financial reporting quality is higher for privately held banks that purchase a review or compilation than for banks that purchase no assurance over the financial statements.*

III. Determinants of Assurance Levels

A. Model Specification

Because I am, to my knowledge, the first to examine the varying levels of assurance that private banks can purchase, I begin by developing a model to predict the level of assurance chosen by a bank. I consider prior literature on the audit choice as well as general bank characteristics and the CAMELS rating system developed by regulators in developing my model. Because several of the assurance levels form natural groups, I partition the sample into four groups as follows for ease of interpretation[8]:

Assurance Group	**Assurance Level**	**Audit Indicator Name**
Audit	9	Bank Audit
	8	Bank Holding Company Audit
Directors' Examination	7	Attestation on Internal Controls
	6	Directors' Examination by CPA
	5	Directors' Examination by Other
Review & Compilation	4	Review
	3	Compilation
No Assurance	2	Other Audit Procedures
	1	No Assurance

I examine the determinants of banks' choice of assurance levels using the following model:

$$PR(Assur\_Group_{it}>j) = \beta_0 + \beta_1 Size_{it-1} + \beta_2 Age_{it-1} + \beta_3 Loans_{it-1} + \beta_4 Deposits_{it-1} + \beta_5 Employees_{it-1} + \beta_6 Leverage_{it-1} + \beta_7 Assur\_Lvl_{it-1} + \beta_8 Tier1_{it-1} + \beta_9 \Delta Tier1_{it-1}$$

[8] My results are not sensitive to the inclusion of the "Attestation on Internal Controls" group in the Audit Group or the Directors' Examination group. Banks whose highest level of assurance is an attestation on the effectiveness of internal controls constitute approximately 1.5 percent of the total sample.

$$+ \beta_{10}\, NPL_{it-1} + \beta_{11} LLP_{it-1} + \beta_{12}\, ChargeOffs_{it-1} + \beta_{13}\, ROA_{it-1} + \beta_{14} Loss_{it-1}$$
$$+ \beta_{15} LoantoDep_{it-1} + \beta_{16} LoanDepIntRatio_{it-1} + \beta_{17} HetLoans_{it-1}$$
$$+ \beta_{18} LoanC_{it-1} + \beta_{19} LoanR_{it-1} + \beta_{20} LoanA_{it-1} + \beta_{21} LoanI_{it-1}$$
$$+ \beta_{23} \Delta Cash\ Flows_{it-1} + \beta_{24} \Delta Loans_{it-1} + \beta_{25} \Delta Deposits_{it-1} + \beta_j StateFE$$
$$+ \beta_k YearFE + \beta_l FedDistrictFE + \eta_{it} \qquad (1)$$

where:

Assur_Group	=	an ordinal variable ranging from zero (no assurance) to three (audit), representing the level of assurance group (no assurance, review or compilation, director's examination, or audit);
Size	=	total assets (RCFD2170);
Age	=	bank age, calculated as year of report date (RSSD9999) less year of date established (RSSD9950);
Loans	=	total loans (RCFD1400) scaled by total assets (RCFD2170);
Deposits	=	total deposits (RCFD2200) scaled by total assets (RCFD2170);
Employees	=	full-time equivalent employees (RIAD4150) during year t-1;
Leverage	=	equity (RCFD3210) scaled by total assets (RCFD2170);
Assur_Lvl	=	10 less the audit level (RCFD6724);
Tier1	=	tier 1 risk-based capital ratio (RCFD7206);
ΔTier1	=	change in Tier1 capital ratio;
NPL	=	Nonperforming loans (nonaccrual loans and leases receivable (RCFD1403) + loans 90+ days past due (RCFD1407)) scaled by total assets (RCFD2170);
LLP	=	Loan loss provision (RIAD4230) scaled by total loans (RCFD1400);
ChargeOffs	=	charge offs on allowance for loan losses, scaled by total assets (RCFD2170);

ROA	=	Net income before income taxes and extraordinary items (RIAD4301) scaled by total assets (RCFD2170).
Loss	=	an indicator variable set equal to one if the bank had a loss during year t-1;
LoantoDep	=	loan to deposit ratio, calculated as total loans (RCFD1400) divided by total deposits (RCFD2200);
LoanDepIntRatio	=	loan to deposit interest ratio, calculated as total loan interest income (RIAD4010) divided by total deposit interest expense (RIAD4170);
HetLoans	=	Heterogeneous loans scaled by total loans. Commercial and industrial loans (RCFD1600) + lease financing receivables (RCFD2165) + loans secured by real estate (RCFD1410) + agricultural loans (RCFD1590) + loans to banks in foreign countries (RCFD1510) /total loans (RCFD1400).
LoanC	=	commercial and industrial loans (RCFD1600) scaled by total loans (RCFD1400);
LoanR	=	real estate loans (RCFD1410) scaled by total loans (RCFD1400);
LoanA	=	agricultural loans (RCFD1590) scaled by total loans (RCFD1400);
LoanI	=	loans to individuals scaled by total loans (RCFD1400);
ΔCashFlows	=	change in earnings before taxes and provision scaled by beginning total assets;
ΔLoans	=	change in loans scaled by beginning total assets;
ΔDeposits	=	change in deposits;
State FE	=	state indicator variables;
Year FE	=	fiscal year indicator variables;
Fed Reserve District FE	=	federal reserve district indicator variables; and

η = the error term.

I estimate Equation (1) using a cross sectional partial proportional odds regression model (Williams 2006).[9] I use a partial proportional odds model rather than an ordered logistic regression model because it is likely that the parallel lines assumption inherent to the ordered logistic regression model is violated by some of my variables. The parallel lines assumption forces all coefficients to take the same value for all values of assurance group (j=1, 2, 3). In untabulated tests, the parallel lines assumption is violated for 13 of the variables assuming a 0.05 level of significance. The partial proportional odds model allows for the relaxation of the parallel lines assumption only for the variables for which the assumption is violated, while keeping it in place for variables that do not violate the assumption. The model is "equivalent to a series of logistic regressions where the categories of the dependent variable are combined" (Williams 2006). In the first regression, *Assur_Group*= 0 (no assurance) is compared to the *Assur_Group*=1 (review or compilation), 2 (director's examination), and 3 (audit) categories. In the second regression, the no assurance group and the review and compilation group are set to zero while the director's examination group and audit group are set to one. In the third regression, all assurance groups below audit are set to zero and audit is set to one. I use robust standard errors clustered by bank to control for multiple appearances of the same banks within my sample (Petersen 2009). All independent variables in the model are measured at time t-1.

General Bank Characteristic Proxies

[9] Some prior literature has found that including fixed effects in nonlinear models can bias coefficient estimates due to the incidental parameters problem (Neyman and Scott 1948; Lancaster 2000). In untabulated tests, I also estimate Equation (1) using ordinary least squares. All inferences are unchanged.

I include in my model general bank characteristics that are likely to be associated with level of assurance. Based upon prior research, I expect larger, older (*Size, Employees, Loans, Deposits, Age*) banks to be associated with higher levels of assurance because they are more complex and may be more willing to purchase a higher level of assurance (Chow 1982; Abdel-Khalik 1993; Carey et al. 2000; Hay and Davis 2004). I expect banks with more leverage (*Leverage*) to purchase higher levels of assurance because debt holders may require an audit or other minimum level of assurance (Chow 1982; Cassar and Minnis 2011). I expect the prior year level of assurance (*Assur_lvl*) to be positively associated with the current year level of assurance.

CAMELS Proxies

I also include proxies for the components of the CAMELS rating (capital adequacy, asset quality, management capability, earnings quality, liquidity, and sensitivity to risk) in the model in order to consider the role of regulators in the level of assurance purchased by a bank. By including several proxies for the components of the CAMELS rating, I capture indicators of risk and poor performance that would increase the likelihood of the bank being encouraged or required to purchase a higher level of assurance. To proxy for capital adequacy (C), I include Tier 1 Capital ratio (*Tier1*) as well as the change in the Tier 1 Capital ratio (*ΔTier1*). Banks with a higher Tier 1 Capital ratio have better risk management and would therefore be less likely to be required to have an audit (Ellul and Yerramilli 2013). I use nonperforming loans (*NPL*), loan loss provision (*LLP*), and charge offs (*ChargeOffs*) to proxy for asset quality (A). Banks with poor asset quality are more likely to fail (Jin et al. 2011; Barton et al. 2015). I therefore expect banks with poorer asset quality to purchase higher levels of assurance due to regulatory and debt holder pressure.

To proxy for management capability (M) and earnings (E), I use ROA (*ROA*) because it is the financial statement ratio most highly correlated with the confidential management ability score given to banks by regulators (DeYoung 1998). I also proxy for earnings using bank losses (*Loss*). Because banks which are in financial distress have been found to be more willing to have an audit, I expect banks with losses to have higher levels of assurance than other banks (Niemi et al. 2012). Banks are also subject to additional regulatory scrutiny if they have a loss and regulators may encourage the bank to purchase an audit. To proxy for liquidity (L), I use the loan to deposit ratio (*LoantoDep*) and the loan to deposit interest ratio (*LoanDepIntRatio*). I also include measures of a bank's sensitivity to risk (S). If a bank is overly weighted in a specific loan type (i.e., real estate loans), that bank would be exposed to additional risk in the case of an economic downturn. I use heterogeneous loans (*HetLoans*), which are loans that are more difficult to value, commercial loans (*LoanC*), real estate loans (*LoanR*), agricultural loans (*LoanA*), and individual loans (*LoanI*), each as a percentage of total loans, to proxy for risk sensitivity (Liu and Ryan 2006).

Additional Control Variables

I also include variables to proxy for growth (*ΔCashFlows*, *ΔLoans*, and *ΔDeposits*). I expect banks that are experiencing growth to purchase higher levels of assurance (Barton et al. 2015). To control for state regulatory and economic differences, I include state fixed effects. I also include year fixed effects to control for the effect of time. I include Federal Reserve District

fixed effects in order to control for differing regulatory enforcement across Federal Reserve districts. (Barton et al. 2015).[10]

B. Sample

I obtain quarterly Report of Condition and Income (call report) data from the Federal Reserve Bank of Chicago (2000 through 2010) and the Federal Financial Institutions Examination Council (FFIEC) Central Data Repository's Public Data Distribution website (2011 through 2013). Because the audit indicator variable is reported only on an annual basis, I use annual data in my analyses. The audit indicator variable is reported in the call report starting with the March 31, 1989 call report; however, in 1999 the FDIC added an "attestation on bank management's assertion on the effectiveness of the bank's internal control over financial reporting by a certified public accounting firm" level to the RCFD6734 audit indicator. My sample period for all tests begins in 2000 in order to keep the variable of interest consistent. The sample period ends in 2012 because I need data for one future year for the assurance level variable. This is due to the assurance level variable for a given year being reported in the March call report of the following year.

Table 1 contains the sample attrition information. I begin with 138,081 bank-year observations of commercial banks headquartered in the US. I eliminate all observations with more than $500 million in total assets, since these banks are required to have audits. This reduces my sample by 17,206 observations. Following other studies of private companies, I eliminate the very smallest banks, defined as those with less than $1 million in total assets and those missing

[10] Of the 14 states that are in two Federal Reserve Districts, nine (Illinois, Kentucky, Louisiana, Michigan, Mississippi, Missouri, New Jersey, New Mexico, and Tennessee) have significantly different average assurance levels for bank-year observations in the same state but different Federal Reserve Districts.

loans and deposits (Hope et al. 2013). This reduces my sample by 13,505 observations. I eliminate banks missing the assurance level variable, reducing my sample by 13,713 observations. Banks can be considered publicly traded for regulatory purposes if the bank itself is publicly traded or if it is part of a publicly traded multibank holding company (Holod and Peek 2007; Lo 2015). In order to remove observations where a bank is publicly traded or part of a publicly traded multibank holding company, I perform several steps. I begin by eliminating observations which indicate that the bank is registered with the SEC or subject to Section 404 of the Sarbanes-Oxley Act of 2002 (SOX) on the call report SEC Reporting Status field (RSSD9056). However, this field only captures the bank's SEC reporting status, not that of the bank holding company. If the bank holding company is publicly traded, the bank is required to have an audit at the consolidated holding company level as a minimum for compliance with SEC requirements. Banks must report on the call report the unique identifier (RSSD ID) of the parent holding company (regulatory high holder) in the Regulatory High Holder ID field (RSSD9348). Banks that do not have a holding company or which are in a one bank holding company use the bank's RSSD ID in this field. To capture bank holding company reporting status, I compare the Regulatory High Holder ID field to the bank RSSD ID field to identify banks that are part of a multibank holding company. For those banks which are in a holding company (i.e., those whose SEC reporting status would not be captured by the SEC Reporting Status indicator variable used above), I match observations to CRSP using the Federal Reserve Bank of New York's CRSP-FRB link file. I then delete all observations with price data in CRSP. This reduces my sample by 1,797 observations. Observations missing necessary variables are also deleted, resulting in a sample reduction of 10,502 observations.

[Insert Table 1 Here]

My sample contains 81,358 bank-year observations, consisting of 8,878 unique banks. All continuous variables are winsorized at the one and 99 percent level to mitigate the effect of outliers. Since I am interested in the bank characteristics associated with the choice of assurance level, all banks in states where more than 95 percent of the sample population purchased an audit are eliminated from all determinants tests.[11] These states may have laws that mandate audits at a much lower threshold than the federal level of $500 million or may have state regulators who systematically differ from those in other states. For example, Alabama requires an audit for all banks with more than $50 million in total assets.[12] While I control for this variation using state-level fixed effects, banks in these states do not appear to have a choice of their level of assurance. This further reduces my sample for the determinants test by 12,531 observations, to 68,827 observations.

C. Results

Descriptive Statistics

Because this is the first study of the varying levels of assurance banks in the United States purchase, I include detailed descriptive statistics. Table 2 contains detailed information about the sample composition. Panel A of Table 2 shows the sample by year and assurance level. The number of banks in the sample decreases monotonically over time, which is in line with the decrease in banks in the U.S. over the same period due to mergers and bank failures (Mccord et al. 2015). The first year in my sample, 2000, represents 9.3 percent of the sample, while the last year, 2012, represents 6.2 percent of the sample. While the number of banks per year decreases through the sample period, the proportion of banks in each assurance level remains relatively

[11] Similar inferences are obtained if this threshold changes to 90 or 100 percent of banks in a state receiving an audit.
[12] The Code of Alabama, 1975, Section 5-2A-22.

constant. The largest proportion of the sample, 40 percent, purchases an audit at the bank level, while only 0.50 percent of bank-year observations are compilations. Panel B of Table 2 gives the Assurance Group by year and in total.

Panel C of Table 2 details the observations by state because state laws and regulators may have an effect on the level of assurance a bank purchases. There is a large variation within the sample. For example, 49 percent of North Dakota observations indicate that the bank purchased no assurance, but 11 states have no bank-year observations that purchase no assurance. In Alaska, Delaware, Hawaii, and Rhode Island, 100 percent of bank-year observations purchase an audit at the bank or holding company level. Figure 1 shows a graphical representation of the mean assurance level by state. Darker shades indicate higher levels of assurance. In general, banks in the Midwestern portion of the United States have lower levels of assurance than banks on the West Coast or East Coast.

[Insert Figure 1 Here]

Panel D of Table 2 gives the observations by Federal Reserve District and Assurance Group. A bank's federal regulator varies based on the Federal Reserve District, so this will likely have an effect on the bank's purchased level of assurance. There is wide variation in the level of assurance by Federal District. Only 0.17 percent of bank-year observations within the Boston Federal Reserve District have no assurance, while 17.11 percent of those in the Minneapolis Federal Reserve District purchase no assurance. Figure 2 presents the mean assurance group by Federal Reserve District. Because 19 states are in more than one Federal Reserve District, it is important to consider potentially different Federal enforcement levels in my analysis.

[Insert Table 2 Here]

[Insert Figure 2 Here]

Table 3 presents descriptive statistics for the full sample. 61.1 percent of observations have an audit at the bank or bank holding company level, 31.7 percent have a directors' examination or internal control assessment, 1.3 percent have a review or compilation, and 5.8 percent purchase no assurance services. Due to the nature of the sample restrictions, the average bank-year observation in my sample is small, with $133 million in assets. Approximately 11 percent of observations in my sample have a loss.

[Insert Table 3 Here]

Table 4 presents comparative descriptive statistics for the different assurance groups. In general, I find that the groups differ on nearly every dimension. Panel A compares banks that purchase a director's examination to banks that purchase an audit. Compared to banks that purchase a directors' examination, banks that purchase an audit are larger (*Size*), less profitable (*ROA*), and newer (*Age*). They have more real estate loans as a proportion of total loans (*LoanR*) and a smaller proportion of agricultural (*LoanA*) and individual loans (*LoanI*). Banks with audits are also less likely to just meet or beat prior year earnings (*JMBE)* and more likely to just avoid losses (*Loss_Avoid).*

Panel B compares banks that purchase a compilation or review to banks that purchase a director's examination. Compared to bank-year observations that purchase a compilation or review, banks with a directors' examination are smaller, more profitable, and older. They have fewer real estate loans and more agricultural and individual loans. There is no significant difference in their likelihood of just meeting or beating prior year earnings or just avoiding a loss. Panel C compares banks that purchase no assurance to banks that purchase compilations or reviews. Compared to banks with no assurance, banks that purchase a compilation or review are larger, less profitable, and newer. They have more real estate loans and fewer agricultural and

individual loans. Again, there is no significant difference in just meeting or beating prior year earnings or just avoiding a loss.

[Insert Table 4 Here]

Multivariate Results

The determinants of banks' levels of assurance are presented in Table 5. All independent variables in the model are measured at time t-1. The three columns of Table 5 present the results of the three comparison groups discussed in the model section. Column 1 presents the results for banks that purchase a review, director's examination, or audit compared to banks that purchase no assurance. In column 2, I present the results of the regression comparing banks that purchase directors' examinations and audits to those that have no assurance, or reviews and compilations. In column 3, I present the results of the regression comparing banks that purchase audits to those that have no assurance, reviews or compilations, and directors' examinations. Most inferences remain consistent across comparison groups. The *Assur_Group* coefficient is positive and significant ($p<0.001$), indicating that the assurance level choice is somewhat sticky. In general, there appear to be two different types of banks that purchase more assurance. On one hand, the bank may be well-managed and seek the additional credit and freedom from regulation that an audit can provide (Kanagaretnam et al. 2003; Lo 2015). This is supported by larger banks (*Size*) with more deposits (*Deposits*), improving Tier 1 capital ratios (*ΔTier1*), and better asset quality (*NPL* and *Charge-Offs*) purchasing more assurance. Banks that are experiencing growth in loans (*ΔLoans*) and deposits (*ΔDeposits*) are also more likely to purchase a higher level of assurance. These results suggest larger, growing banks purchase higher levels of assurance than other banks.

On the other hand, a bank may be pressured into purchasing a higher level of assurance by federal and state regulators due to its poor performance or higher risk profile. Banks with lower returns on assets (*ROA*) are more likely to purchase more assurance, as are banks with a higher loan to deposit ratio (*LoantoDep*), suggesting that banks that are less liquid and take on more risk purchase higher levels of assurance. The coefficient on total loans as a percentage of total assets (*Loans*) is negative and significant ($p<0.001$), suggesting that banks that are more complex and therefore have a lower ratio of loans to total assets are more likely to purchase a higher level of assurance. As seen in column 3, banks that purchase audits specifically are likely to be younger (*Age*), have more leverage (*Leverage*), and are more likely to have losses (*Loss*). Taken together, these results suggest that regulators may influence the decision of riskier, more poorly performing banks to purchase an audit rather than a lower level of assurance.

[Insert Table 5 Here]

IV. Implications of Assurance Level

A. Discretionary Loan Loss Provision Model

To test whether a bank's chosen level of assurance affects its financial statement quality, I begin by examining the relation between the level of assurance purchased by a bank and discretionary loan loss provisions. The loan loss provision is generally the largest and most complex accrual for banks. It is also subject to a great deal of judgment and discretion on the part of management. Many studies have found evidence of banks using the loan loss provision to manage earnings (Beatty et al. 1995; Beatty and Harris 1998; Beatty et al. 2002; Kanagaretnam et al. 2003; Cornett et al. 2009; Kanagaretnam et al. 2010). However, others (Ahmed et al. 1999) find no evidence of earnings management using the loan loss provision and instead find that the loan loss provision is used to manage regulatory capital levels and ratios. I first estimate the

following model of discretionary loan loss provisions using an ordinary least squares regression model, following Kanagaretnam et al. (2003):

$$LLP_{it}=\gamma_0 + \gamma_1 Tier1_{it-1}+\gamma_2 TCAP_{it-1}+\gamma_3 \Delta LOAN_{it}+\gamma_4 LLA_{it-1} + \gamma_5 EBTPS_{it} + \gamma_6 NPL_{it} + \gamma_7 \Delta NPL_{it} + \gamma_8 ChargeOffs_{it} + \beta_j YearFE + \epsilon_{it} \quad (2)$$

where:

LLP = the loan loss provision scaled by total loans;

TCAP = the Total Risk Adjusted capital ratio at year t-1;

LLA = the allowance for loan and lease losses (RCFD3123) scaled by total assets (RCFD2170);

EBTPS = earnings before taxes, loan loss provision, and special items in year t scaled by total assets;

ΔNPL = the change in nonperforming loans from year t-1 to t, scaled by total assets;

YearFE = fiscal year indicator variables;

ϵ = the error term.

All other variables are previously defined. The residual from this model, ϵ, represents the component of the loan loss provision that is unexplained by loan activity. It captures management's discretion in the estimate of the loan loss provision or *DLLP*. Using this residual as the dependent variable, I next estimate the following ordinary least squares (OLS) regression model:

$$DLLP_{it} = \beta_0 + \beta_1 Audit_{it} + \beta_2 IC\_Exam_{it} + \beta_3 Review\_Comp_{it} + \beta_4 Size_{it} + \beta_5 Leverage_{it} + \beta_6 Assur\_Lvl_{it-1} + \beta_7 \Delta Assur\_Lvl_{it} + \beta_8 Tier1_{it} + \beta_9 \Delta Tier\ 1_{it} + \beta_{10} NPL_{it} + \beta_{11} LLP_{it} + \beta_{12} ROA_{it} + \beta_{13} HetLoans_{it} + \beta_{14} LoanC_{it} + \beta_{15} \Delta CashFlows_{it} + \beta_{16} \Delta Loans_{it} + \beta_{17} \Delta Deposits_{it} + \beta_j StateFE + \beta_k YearFE + \beta_l FedDistrictFE + \eta_{it} \quad (3)$$

where:

DLLP = the discretionary portion of the loan loss provision, measured as the residual from Equation (2);

Audit = an indicator variable set equal to one if the bank purchased an audit at the bank or holding company level in the current year (RCFD6724), zero otherwise;

IC_Exam = An indicator variable set equal to one if the bank purchased an attestation on the effectiveness of internal controls or a directors' examination in the current year (RCFD6724), zero otherwise;

Review_Comp = an indicator variable set equal to one if the bank purchased a review or compilation in the current year (RCFD6724), zero otherwise.

All other variables are previously defined. The coefficients of interest are β_1, β_2, and β_3, which represent how the level of assurance is associated with the discretionary loan loss provision. Negative and significant values for these coefficients would suggest that purchasing assurance is negatively associated with the degree to which bank managers manipulate the loan loss provision relative to banks that receive no assurance.

I include control variables that prior literature has found to be associated with *DLLP* (DeBoskey and Jiang 2012). I control for the size of the bank (*Size*), the degree to which the bank is leveraged (Leverage), the prior year assurance level (*Lag_Assur_Lvl*), and the change in assurance level from the prior year (*ΔAssur_Lvl*). I also control for capital adequacy (*Tier1* and *ΔTier1*), the proportion of nonperforming loans (*NPL*), and the proportion of loan loss provision to total loans (*LLP*), all of which could incentivize bank management to use more discretion in the loan loss provision. I control for management ability (*ROA*) and the percentage of commercial and heterogeneous loans, which require additional management judgment to determine the appropriate reserve (*LoanC* and *HetLoans*)(Liu and Ryan 2006). Finally, I control for growth using changes in cash flows, loans, and deposits. Following Beatty et al. (2002), I

control for regional effects with Federal Reserve District indicator variables. I also include state and year fixed effects.

B. Just Meet or Beat Prior Year Earnings Model

I next use the propensity to just meet or beat prior year earnings as a proxy for financial reporting quality. While privately held banks do not have a large number of shareholders who are restricted to the use of earnings based performance measures, they are still incentivized to meet or beat prior year earnings (Beatty et al. 2002). Regulators are concerned with the earnings quality of the bank and bank customers and large creditors are sensitive to the health of their bank and may choose to move their deposits elsewhere if they perceive the possibility of a bank failure, which can in turn lead to a run on the bank (Diamond and Dybvig 1983). This is particularly true for large uninsured depositors (Lo 2015). In order to test whether banks just meet or beat prior year earnings using discretion, I first adapt a measure used by Davis et al. (2009) in a non-banking paper. In a paper examining the relation between auditor tenure and the ability to meet or beat analyst forecasts, the authors construct a measure of pre-managed earnings per share (EPS) by subtracting discretionary accruals per share from reported EPS. The authors use this measure to estimate the difference between analysts' estimated earnings and the earnings that would be reported if no discretionary accruals were used by management. I adapt this measure for privately held banks using ROA and the discretionary loan loss provision scaled by assets. I begin by calculating nondiscretionary ROA (*NROA*), which is defined as:

NROA = Actual ROA – (DLLP/Assets)

NROA represents the portion of ROA that is not subject to management's discretion over the DLLP. I exclude from the sample all bank-year observations with a change in nondiscretionary ROA (*ΔNROA*) greater than or equal to zero. Since this is the change in

earnings that would result if no discretionary loan loss provision were used, these banks would have no incentive to manage earnings further to narrowly meet or beat prior year earnings because that benchmark has already been achieved (Davis et al. 2009). Following Kanagaretnam et al. (2010), I define just meeting or beating prior year earnings as an increase in ROA between zero and 0.0005. I next identify banks whose *ΔNROA* is negative, but who just meet or beat prior year earnings using actual *ΔROA* (i.e. those banks that have likely manipulated current year earnings in order to beat prior year). For these banks, *JMBE* is set equal to one. I then estimate the following logistic regression model:

$$\begin{aligned} PR(JMBE_{it}) = {} & \beta_0 + \beta_1 Audit_{it} + \beta_2 IC\_Exam_{it} + \beta_3 Review\_Comp_{it} + \beta_4 Size_{it} + \beta_5 Leverage_{it} \\ & + \beta_6 Assur\_Lvl_{it-1} + \beta_7 \Delta Assur\_Lvl_{it} + \beta_8 Tier1_{it} + \beta_9 \Delta Tier\ 1_{it} + \beta_{10} NPL_{it} + \beta_{11} LLP_{it} \\ & + \beta_{12} ROA_{it} + \beta_{13} HetLoans_{it} + \beta_{14} LoanC_{it} + \beta_{15} \Delta CashFlows_{it} + \beta_{16} \Delta Loans_{it} \\ & + \beta_{17} \Delta Deposits_{it} + \beta_j StateFE + \beta_k YearFE + \beta_l FedDistFE + \eta_{it} \quad (4) \end{aligned}$$

where:

JMBE = An indicator variable set equal to one if ΔROA is between zero and 0.0005, and ΔNROA is less than zero, zero otherwise.

All other variables are previously defined. The coefficients of interest are β_1, β_2, and β_3, which represent how the level of assurance affects the propensity of banks to just meet or beat prior year earnings. Negative and significant values for these coefficients would suggest that purchasing assurance is negatively associated with the degree to which bank managers use discretion to just meet or beat prior year earnings relative to banks that receive no assurance. I include control variables previously found in the literature to be associated with earnings management in banks (Kanagaretnam et al. 2010; DeBoskey and Jiang 2012). I control for the size of the bank (*Size*), the degree to which the bank is leveraged (Leverage), the prior year assurance level (*Lag_Assur_Lvl*), and the change in assurance level from the prior year (*ΔAssur_Lvl*). I also control for capital adequacy (*Tier1* and *ΔTier1*), the proportion of nonperforming loans (*NPL*), and the proportion of loan loss provision to total loans (*LLP*), all of

which could incentivize bank management to use more discretion in the loan loss provision. I control for management ability (*ROA*) and the percentage of commercial and heterogeneous loans, which require additional management judgment to determine the appropriate reserve (*LoanC* and *HetLoans*)(Liu and Ryan 2006). Finally, I control for changes in cash flows, loans, and deposits.

C. Loss Avoidance Model

I next examine the relation between assurance and the propensity to just avoid a loss using discretion. I eliminate all bank-year observations with *NROA* greater than zero since these banks have avoided a loss without the use of discretion and therefore have no need to manage earnings within the narrowly defined loss avoidance interval. Following Kanagaretnam et al. (2010), I define just avoiding a loss as a *ROA* between zero and 0.002. I then identify bank-year observations that have a negative *NROA*, but just avoid a loss using unadjusted *ROA*. I set *Loss_Avoid* equal to one for these observations, which have avoided a loss using discretion. I estimate the following logistic regression model:

$$\begin{aligned}\text{PR}(Loss\_Avoid_{it}) = {} & \beta_0 + \beta_1 Audit_{it} + \beta_2 IC\_Exam_{it} + \beta_3 Review\_Comp_{it} + \beta_4 Size_{it} + \beta_5 Leverage_{it} \\ & + \beta_6 Assur\_Lvl_{it-1} + \beta_7 \Delta Assur\_Lvl_{it} + \beta_8 Tier1_{it} + \beta_9 \Delta Tier\ 1_{it} + \beta_{10} NPL_{it} \\ & + \beta_{11} LLP_{it} + \beta_{12} ROA_{it} + \beta_{13} HetLoans_{it} + \beta_{14} LoanC_{it} + \beta_{15} \Delta CashFlows_{it} \\ & + \beta_{16} \Delta Loans_{it} + \beta_{17} \Delta Deposits_{it} + \beta_j StateFE + \beta_k YearFE \\ & + \beta_l FedDistFE + \eta_{it} \qquad (5)\end{aligned}$$

where:

Loss_Avoid = An indicator variable set equal to one if ROA is between aero and 0.002 and NROA is less than zero, zero otherwise.

All other variables are previously defined. The coefficients of interest are β_1, β_2, and β_3, which represent how the level of assurance affects the propensity of banks to just avoid a loss. Negative and significant values for these coefficients would suggest that purchasing assurance

decreases the degree to which bank managers use discretion to just avoid a loss relative to banks that receive no assurance.

I control for the size of the bank (*Size*), the degree to which the bank is leveraged (Leverage), the prior year assurance level (*Lag_Assur_Lvl*), and the change in assurance level from the prior year (*ΔAssur_Lvl*). I also control for capital adequacy (*Tier1* and *ΔTier1*), the proportion of nonperforming loans (*NPL*), and the proportion of loan loss provision to total loans (*LLP*), all of which could incentivize bank management to use more discretion in the loan loss provision. I control for management ability (*ROA*) and the percentage of commercial and heterogeneous loans, which require additional management judgment to determine the appropriate reserve (*LoanC* and *HetLoans*) (Liu and Ryan 2006). Finally, I control for changes in cash flows, loans, and deposits.

D. Sample

The elimination of all observations where the bank met or exceeded prior year earnings without the use of discretion reduces my sample for the JMBE test from 81,358 observations to 36,644 observations. For the loss avoidance test, I eliminate all observations that have NROA greater than zero, to eliminate firms that did not have a loss using the NROA calculation. This reduces my sample for that test to 10,941 observations.

E. Financial Reporting Quality Results

Table 6 presents tests of the relation between banks' level of assurance and financial reporting quality. If higher levels of assurance improve banks' financial reporting quality, I would expect that the level of discretionary loan loss provision (*DLLP*), the probability of just meeting or beating prior year earnings (*JMBE*), and the probability of just avoiding a loss

(*Loss_Avoid*) will be lower for banks that purchase higher levels of assurance. I also expect that audits would be significantly better than directors' examinations, reviews, or compilations.

Column (1) presents the results using *DLLP* as a proxy for financial reporting quality. For ease of interpretation, I multiply all coefficients in the model by 100. The coefficient on *Audit* is negative and significant ($p < 0.01$), suggesting that banks that purchase audits have lower levels of discretionary loan loss provisions on average than banks that purchase no assurance. The coefficients on *IC_Exam* and *Review_Comp* are also negative and significant ($p < 0.01$ and $p=0.034$, respectively), indicating that all forms of assurance are associated with lower levels of *DLLP* in banks. F-tests show that the coefficients on each of my three variables of interest are significantly different from each other. Audits are significantly better at constraining DLLP than either directors' examinations or reviews and compilations, and directors' examinations are significantly better than reviews and compilations.

Column (2) presents the results using just meeting or beating prior year earnings (*JMBE)* as a proxy for financial reporting quality. The area under the Receiver Operating Characteristic (ROC) curve is 0.836, indicating a good model fit (Hosmer and Lemeshow 2000). I find that the coefficient on *Audit* is negative and significant ($p = 0.032$), indicating that audited banks are less likely than banks that purchase no assurance to just meet or beat prior year earnings using discretion. The coefficient on *IC_Exam* is also negative and significant ($p = 0.028$), however the coefficient on *Review_Comp* is positive and insignificant. F-tests show that the coefficients on each of my three variables of interest are significantly different from each other. Banks with audits are significantly less likely to just meet or beat prior year earnings using discretion than banks with either directors' examinations or reviews and compilations, and banks with directors'

examinations are also significantly less likely to just meet or beat prior year earnings than those that purchase reviews and compilations.

In column (3) of Table 6, I examine the relation between assurance level and just avoiding a loss (*Loss_Avoid*). The area under the ROC curve is 0.726, indicating a fair model fit (Hosmer and Lemeshow 2000). I find that the coefficient on *Audit* is negative and marginally significant (p = 0.077), while the coefficients on *IC_Exam* and *Review_Comp* are both negative and insignificant. This result suggests that audited banks are less likely to use to discretion to just avoid a loss (*Loss_Avoid*), however, banks that purchase lower levels of assurance are not statistically less likely to just avoid a loss than banks that purchase no assurance services at all. F-tests indicate that while the coefficient on *Audit* is significantly different from *IC_Exam* and *Review_Comp*, the coefficients on *IC_Exam* and *Review_Comp* do not differ from each other. Taken together, my results suggest that higher levels of assurance are associated with better financial reporting quality, and that banks that purchase audits have significantly better financial reporting quality and less earnings management than those that purchase directors' examinations and other non-audit assurance.

[Insert Table 6 Here]

V. Robustness Tests

A. Exclusion of Multibank Bank Holding Companies

Most banks in the United States are controlled by bank holding companies. Bank holding companies can control one or many banks in addition to other nonbank subsidiary companies. In order to determine whether bank assurance decisions are made at the bank level or the bank holding company level, I analyze the assurance level of banks that are part of a multibank holding company on an annual basis in Table 7. Approximately 84 percent of my sample is

comprised of single banks, while the remaining 16 percent is made up of banks that are part of a multibank bank holding company. Of that 16 percent, approximately 22 percent have different assurance levels in the same year within the same bank holding company. Therefore, assurance decisions appear to be made to some extent at the bank level.

[Insert Table 7 Here]

In my main determinants test, I include all banks regardless of the number of banks in the same bank holding company. In robustness tests, I also run my determinants tests after excluding all banks that are part of multibank bank holding companies. This reduces my sample by 12,025 bank-year observations, to 56,748. The results are presented in Table 8. All results remain consistent with respect to direction and significance with the exception of the coefficient on *ΔDeposits*, which loses significance in the robustness model except in the model comparing banks that purchase audits with those that purchase all other levels of assurance, where it remains positive and significant (p=0.000).

[Insert Table 8 Here]

B. Just Meet or Beat and Loss Avoidance Threshold Sensitivity

In my main tests, I use thresholds for just meeting or beating prior year earnings and loss avoidance from Kanagaretnam et al. (2010). In robustness tests, I follow Degeorge et al. (1999) and Beatty et al. (2002) and construct histograms of return on assets (*ROA*) and the change in return on assets (*ΔROA*). Following their methodology, I use bin widths of twice the interquartile range of the variables, multiplied by the negative cube root of the sample size. Using this formula, the bin width for *ROA* is 0.0025 and the bin width for *ΔROA* is 0.0016. I use these bin widths to construct thresholds for *ROA* and *ΔROA* that would be considered small (i.e. just

avoiding a loss and just meeting or beating prior year earnings, respectively). In Table 9, I examine whether the relation between *JMBE* and my measures of assurance group varies based on the threshold used to define *JMBE*. All inferences remain the same as in Table 6 when I use a threshold of one, two, or three bin widths. This suggests that banks that purchase higher levels of assurance are less likely to just meet or beat earnings using discretion.

[Insert Table 9 Here]

In Table 10, I examine whether the relation between *Loss_Avoid* and my measures of assurance group varies based on the threshold used to define *Loss_Avoid*. All inferences remain the same as in Table 6 when I use a threshold of two or three bin widths. However, the coefficient on *Audit* is insignificant when the *Loss_Avoid* threshold is defined as one bin width. Taken together, these results suggest that banks that purchase higher levels of assurance are less likely to manage earnings to meet benchmarks than banks that do not purchase assurance.

[Insert Table 10 Here]

C. Excluding Banks with Large Losses and Large Negative Changes in Earnings

In the main tests of the relation between bank assurance level and financial reporting quality, I include all banks with $\Delta NROA$ less than zero for the just meet or beat prior year earnings test. However, some banks have large negative changes in earnings such that even if they eliminated the entire allowance for loan and lease losses (the contra-asset account), they would be unable to beat prior year earnings. I adapt a measure from a non-banking paper in order to test the sensitivity of my results to the elimination of banks that would not be able to achieve the respective earnings benchmarks. Cassell et al. (2015) examine the relation between disclosure transparency in the valuation allowance accounts and earnings management. They limit their sample to "companies where the beginning balance of the allowance account is at least

one cent per share" (Cassell et al. 2015). Because earnings per share is not an important measure for privately held banks, I adapt the measure as follows. As a robustness test, I remove all observations from the sample where:

$$\Delta NROA + LLA \leq 0$$

where:

LLA = the allowance for loan and lease losses scaled by total assets.

This eliminates banks that could not use discretion to just meet or beat prior year earnings. Table 11 presents the results of the logistic regression. The coefficients on *Audit* and *IC_Exam* both remain negative and significant, however; the coefficient on *Review_Comp*, while still negative, is no longer significant.

[Insert Table 11 Here]

In the main tests of the relation between bank assurance level and financial reporting quality, I include all banks with *NROA* less than zero for the loss avoidance test. However, some banks have large losses such that even if they eliminated the entire allowance for loan and lease losses (the contra-asset account), they would be unable to avoid a loss. I again adapt the sample restriction in Cassell et al. (2015) to the banking setting. As a robustness test, I remove all observations from the sample where:

$$NROA + LLA \leq 0$$

This eliminates banks that could not use discretion to just avoid a loss. Table 12 presents the results of the logistic regression. The coefficients on *Audit* and *IC_Exam* are negative and significant, however; the coefficient on *Review_Comp*, while negative, is not significant.

[Insert Table 12 Here]

D. Financial Reporting Quality Model Specification Robustness Test

In my main financial reporting quality tests, I control for both the change in assurance level and the prior year assurance level. In order to rule out potential confounding effects of those variables, I eliminate them from the models as a robustness test. Table 13 presents the results of the ordinary least squares and logistic regressions. My inferences for the variables of interest remain unchanged. My results do not appear to be sensitive to the inclusion or exclusion of the change in assurance level and prior year assurance level variables.

[Insert Table 13 Here]

VI. Conclusion

In this paper, I investigate a unique disclosure in commercial bank call reports, the level of assurance obtained by a bank. Using a partial proportional odds model, I first examine determinants of the assurance purchased by a bank. I find that two types of banks are associated with higher levels of assurance. Banks that are well-managed and seeking additional credit have higher levels of assurance. These include larger banks with better asset quality and those experiencing growth. On the other hand, banks with poor financial performance and higher leverage in the previous year are associated with higher levels of assurance. These results suggest that regulatory pressure because of poor financial performance is one reason why small privately held banks have a financial statement audit.

I then examine the financial reporting quality consequences of banks' levels of assurance. I find that audits, bank directors' examinations, and reviews and compilations are associated with lower levels of discretionary loan loss provisions, suggesting that banks that purchase higher levels of assurance manage earnings less than banks with no assurance services. I find that banks that purchase audits and bank directors' examinations are less likely to just meet or beat prior

year earnings using discretion. I find weak evidence that banks with audits are less likely to use discretionary loan loss provisions to avoid a loss. In sum, higher levels of assurance are associated with better financial reporting quality and decreased earnings management in privately held U.S. commercial banks.

This is the first study to examine levels of assurance in the financial industry, and benefits from a large, detailed data set of financial information for privately held banks. These results should be of interest to regulators, bank stakeholders, and researchers interested in privately held companies and financial institutions. Further research might investigate other consequences of the level of assurance a bank purchases and examine the link between regulation and assurance.

This study has several limitations. First, since I focus on only one highly regulated industry, the results may not generalize to other private companies. The highly regulated nature of the banking industry should bias me against finding results, however, since external audit should not matter as much as it does in other, less regulated industries. Both federal and state regulators frequently examine commercial banks and bank managers would generally defer more to a regulator's opinion than the advice of an auditor regarding accounting matters. Second, I cannot determine whether the financial reporting quality results are due to the increased level of assurance itself or due to the types of managers who are more likely to purchase higher levels of assurance also being more likely to have better financial reporting quality. Finally, the auditor or other assurance provider's firm name is not available in the call report data. Therefore, I cannot

control for auditor quality variables such as Big N or industry specialization. Audit or assurance fees are also generally not disclosed in the call report.[17]

[17] Audit fees are only required to be disclosed if they are one of the top three non-interest expenses for the bank.

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APPENDIX A - Call Report Audit Indicator Disclosure

Memoranda

To be reported with the March Report of Condition.

1. Indicate in the box at the right the number of the statement below that best describes the most comprehensive level of auditing work performed for the bank by independent external auditors as of any date during *2014* .....

RCON	Number
6724	

M.1.

1 = Independent audit of the bank conducted in accordance with generally accepted auditing standards by a certified public accounting firm which submits a report on the bank
2 = Independent audit of the bank's parent holding company conducted in accordance with generally accepted auditing standards by a certified public accounting firm which submits a report on the consolidated holding company (but not on the bank separately)
3 = Attestation on bank management's assertion on the effectiveness of the bank's internal control over financial reporting by a certified public accounting firm
4 = Directors' examination of the bank conducted in accordance with generally accepted auditing standards by a certified public accounting firm (may be required by state-chartering authority)
5 = Directors' examination of the bank performed by other external auditors (may be required by state-chartering authority)
6 = Review of the bank's financial statements by external auditors
7 = Compilation of the bank's financial statements by external auditors
8 = Other audit procedures (excluding tax preparation work)
9 = No external audit work

Exclude from "auditing work performed" any tax or consulting work regardless of whether it was performed by an independent certified public accounting firm or others.

The list of possible external auditing work is structured with the "most comprehensive level," an audit of the bank, as number 1 and the other levels of auditing work in descending order so that "no external audit work" is number 9.

Banks may be assisted in determining the level of auditing work performed by reviewing the type of report received from the auditor:

(a) If the bank or parent holding company has external auditing work performed by a certified public accounting firm and the report of the auditor:

Begins	"We have examined . . ." or "We have audited . . ."
and	
The final paragraph begins	"In our opinion, the financial statements referred to above . . ." or
	In our opinion, the balance sheet referred to above . . ."

the bank would respond to this item with a "1" if the first sentence of the first paragraph of the report describes the financial statements or the balance sheet of the bank or with a "2" if the first sentence of the first paragraph of the report describes the financial statements or the balance sheet of the parent holding company.

APPENDIX A - Call Report Audit Indicator Disclosure, Continued

Item No.	Caption and Instructions
1 (cont.)	(b) If the report submitted by the auditor:

Begins "We have examined management's assertion . . . maintained effective internal control over financial reporting . . .,"

and

The final paragraph states "In our opinion . . ."

the bank would respond to this item with a "3."

(c) If the report submitted by the auditor:

Begins "We have applied certain procedures to selected records and transactions . . .,"

The second paragraph includes "We do not express an opinion, . . ."

and

The next to last paragraph states "Had we performed additional procedures . . . other matters may have come to our attention . . ."

the bank would respond with:

(i) a "4" if this auditing work was performed by a certified public accounting firm for the Board of Directors as a directors' examination;

(ii) a "5" if this auditing work was performed by any other firm (e.g., a consulting firm, another banking organization) for the Board of Directors as a directors' examination; or

(iii) an "8" if management otherwise engaged the auditor to perform specified auditing work (excluding tax or consulting work) but this auditing work did not constitute a directors' examination.

(d) If the report submitted by the auditor:

Begins "We have reviewed . . . ,"

The second paragraph states "A review consists principally of inquiries . . . ,"

and

The final paragraph begins "Based on our review . . ."

the bank would respond to this item with a "6."

APPENDIX A - Call Report Audit Indicator Disclosure, Continued

Item No.	Caption and Instructions

1 (cont.)

(e) If the report submitted by the auditor:

Begins "We have compiled . . ."

and

The second paragraph begins "A compilation is limited to presenting . . . "

the bank would respond to this item with a "7."

An "independent external auditor" is an auditor who at no time during the year:

(1) was an employee of the bank;

(2) performed the bank's bookkeeping or maintained the bank's accounting records;

(3) was dependent on the bank for his livelihood nor was the bank such a significant client that the loss of that client would jeopardize his livelihood; nor

(4) held the bank's securities or was indebted to the bank beyond those types of loans permitted under applicable professional standards.

APPENDIX B - Variable Definitions

Dependent Variables	
Variable Name	**Definition**
Assur_Group	An ordinal variable ranging from zero (no assurance) to three (audit), representing the level of assurance group (no assurance, review or compilation, director's examination, or audit).
DLLP	The residual from the following regression: $LLP_{it}=\gamma_0 + \gamma_1 Tier1_{it-1}+\gamma_2 TCAP_{it-1}+\gamma_3 \Delta LOAN_{it}+\gamma_4 LLA_{it-1} + \gamma_5 EBTPS_{it} + \gamma_6 NPL_{it} + \gamma_7 \Delta NPL_{it} + \gamma_8 ChargeOffs_{it} + \beta_j YearFE + \epsilon_{it}$
JMBE	An indicator variable set equal to one if ΔROA is between zero and 0.0005, zero otherwise.
Loss_Avoid	An indicator variable set equal to one if ROA is between 0 and 0.002, zero otherwise.
Variables of Interest	
Audit	An indicator variable set equal to one if the bank received an audit at the bank or holding company level in the current year (RCFD6724), zero otherwise.
IC_Exam	An indicator variable set equal to one if the bank received an attestation on the effectiveness of internal controls or a directors' examination in the current year (RCFD6724), zero otherwise.
Review_Comp	An indicator variable set equal to one if the bank received a review or compilation in the current year (RCFD6724), zero otherwise.
Control Variables	
General Bank Characteristics	
Size	The natural logarithm of total assets (RCFD2170).
Age	The natural logarithm of bank age, calculated as year of report date (RSSD9999) less year of date established (RSSD9950) plus one.
Loans	Total loans (RCFD1400) scaled by total assets (RCFD2170).
Deposits	Total deposits (RCFD2200) scaled by total assets (RCFD2170).

Employees	The natural logarithm of full-time equivalent employees (RIAD4150) during year t-1.
Leverage	Total equity (RCFD3210) divided by total assets (RCFD
Assur_Lvl	10 less the audit level (RCFD6724).
LLA	Allowance for loan and lease losses (RCFD3123) scaled by total assets (RCFD2170).
Capital Adequacy	
Tier1	Tier 1 risk-based capital ratio (RCFD7206).
ΔTier1	Change in Tier1 capital ratio.
Asset Quality	
NPL	Nonperforming loans (nonaccrual loans and leases receivable (RCFD1403) + loans 90+ days past due (RCFD1407)) scaled by total assets (RCFD2170).
LLP	Loan loss provision (RIAD4230) scaled by total loans (RCFD1400).
ChargeOffs	Charge offs on allowance for loan losses, scaled by total assets (RCFD2170).
Management Capability and Earnings	
ROA	Net income before income taxes and extraordinary items (RIAD4301) scaled by total assets (RCFD2170).
Loss	An indicator variable set equal to one if the bank had a loss during year t-1 and zero otherwise.
Liquidity	
LoantoDep	Loan to deposit ratio, calculated as total loans (RCFD1400) divided by total deposits (RCFD2200).
LoanDepIntRatio	Loan to deposit interest ratio, calculated as total loan interest income (RIAD4010) divided by total deposit interest expense (RIAD4170).
Sensitivity to Risk	

HetLoans	Heterogeneous loans scaled by total loans. Commercial and industrial loans (RCFD1600) + lease financing receivables (RCFD2165) + loans secured by real estate (RCFD1410) + agricultural loans (RCFD1590) + loans to banks in foreign countries (RCFD1510) /total loans (RCFD1400).
LoanC	Commercial and industrial loans (RCFD1600) scaled by total loans (RCFD1400).
LoanR	Real estate loans (RCFD1410) scaled by total loans (RCFD1400)
LoanA	Agricultural loans (RCFD1590) scaled by total loans (RCFD1400).
LoanI	Loans to individuals scaled by total loans (RCFD1400).
Growth	
Δ CashFlows	Change in net income before income taxes and extraordinary items (RIAD4301) less the loan loss provision (RIAD4230), scaled by total assets (RCFD2170).
ΔROA	Change in ROA.
ΔLoans	Change in loans.
ΔDeposits	Change in deposits.
ΔHetLoans	Change in heterogeneous loans.
Fixed Effects	
State FE	State indicator variables.
Year FE	Fiscal year indicator variables.
Fed Reserve District FE	Federal reserve district indicator variables.

TABLE 1 - Sample Selection

	Bank-Year Observations	
Total US bank-year call report observations	138,081	
Less: observations with greater than $500 million in total assets	(17,206)	
Less: observations with less than $1 million in total assets or less than $1 in loans or deposits	(13,505)	
Less: observations missing assurance level variable	(13,713)	
Less: publicly traded observations	(1,797)	
Less: observations missing necessary variables	(10,502)	
Final Sample, Discretionary Loan Loss Provision Model	**81,358**	*
Assurance Level Determinants Sample Selection		
Discretionary Loan Loss Provision sample from above	81,358	
Less: observations in states with more than 95% audit	(12,531)	
Final Sample, Assurance Level Determinants Model	**68,827**	
Just Meet or Beat Prior Year Earnings Sample Selection		
Discretionary Loan Loss Provision sample from above	81,358	
Less: observations with ΔNROA > 0	(44,714)	
Final Sample, Just Meet or Beat Prior Year Earnings Model	**36,644**	
Loss Avoidance Sample Selection		
Discretionary Loan Loss Provision sample from above	81,358	
Less: observations with NROA > 0	(70,417)	
Final Sample, Loss Avoidance Model	**10,941**	

*8,878 unique banks

TABLE 2 - Sample Summary

Panel A: Assurance Level by Year

	Total		No Assurance		Compilation and Review		Director's Exam			Audit	
Year	#	%	No Assur. %	Other Audit Proc. %	Comp-ilation %	Review %	Directors' Exam %	Directors' Exam by CPA Firm %	Attest. on IC %	BHC Audit %	Bank Audit %
2000	7,571	9.31	3.16	1.85	0.41	0.61	4.39	24.49	2.54	21.58	40.99
2001	7,390	9.08	3.04	1.88	0.37	0.60	5.05	23.95	1.83	21.71	41.58
2002	7,184	8.83	3.15	2.07	0.33	0.64	5.01	23.94	1.63	22.12	41.11
2003	7,004	8.61	3.06	2.33	0.34	0.80	5.33	23.74	1.41	23.20	39.79
2004	6,794	8.35	2.91	2.49	0.38	0.78	5.45	24.14	1.46	23.43	38.96
2005	6,189	7.61	3.10	2.75	0.42	0.69	6.27	25.64	1.50	19.39	40.23
2006	6,028	7.41	3.57	2.75	0.48	0.93	5.99	25.03	1.19	20.19	39.86
2007	5,929	7.29	3.39	2.82	0.46	1.05	5.89	24.59	1.25	20.24	40.33
2008	5,820	7.15	3.11	3.44	0.57	1.01	5.69	24.83	1.22	20.41	39.73
2009	5,674	6.97	2.96	3.33	0.60	1.30	5.60	25.59	1.15	20.00	39.46
2010	5,456	6.71	3.10	3.08	0.48	1.12	5.68	25.53	1.26	20.75	39.00
2011	5,251	6.45	3.10	3.33	0.65	1.03	5.79	25.75	1.10	20.72	38.53
2012	5,068	6.23	3.24	3.57	0.85	0.85	5.60	25.99	0.97	20.28	38.65
Total	81,358	100.00									

TABLE 2 – Sample Summary, Continued
Panel B: Assurance Group by Year

	Total		No Assurance Group	Compilation and Review Group	Director's Exam Group	Audit Group
Year	**#**	**%**	**%**	**%**	**%**	**%**
2000	7,571	9.31	5.01	1.02	31.41	62.57
2001	7,390	9.08	4.93	0.96	30.83	63.29
2002	7,184	8.83	5.22	0.97	30.58	63.22
2003	7,004	8.61	5.38	1.14	30.48	62.99
2004	6,794	8.35	5.40	1.16	31.04	62.39
2005	6,189	7.61	5.85	1.11	33.41	59.62
2006	6,028	7.41	6.32	1.41	32.22	60.05
2007	5,929	7.29	6.21	1.50	31.73	60.57
2008	5,820	7.15	6.55	1.58	31.74	60.14
2009	5,674	6.97	6.29	1.90	32.34	59.46
2010	5,456	6.71	6.18	1.59	32.48	59.75
2011	5,251	6.45	6.44	1.68	32.64	59.25
2012	5,068	6.23	6.81	1.70	32.56	58.94
Total	81,358	100.00				

TABLE 2 - Sample Summary, Continued
Panel C: Assurance Group by State

	Total		No Assurance Group	Compilation and Review Group	Director's Exam Group	Audit Group
State	**#**	**%**	**%**	**%**	**%**	**%**
AK	46	0.06	0.00	0.00	0.00	100.00
AL	1,597	1.96	0.19	0.38	28.87	70.57
AR	1,625	2.00	4.37	0.92	27.94	66.77
AZ	335	0.41	0.60	0.30	4.48	94.63
CA	2,182	2.68	0.92	0.18	1.05	97.85
CO	1,548	1.90	0.13	0.52	31.14	68.22
CT	355	0.44	0.00	0.28	0.00	99.72
DC	54	0.07	1.85	0.00	0.00	98.15
DE	122	0.15	0.00	0.00	0.00	100.00
FL	2,438	3.00	0.16	0.90	6.60	92.33
GA	3,164	3.89	0.32	0.25	3.19	96.24
HI	28	0.03	0.00	0.00	0.00	100.00
IA	4,579	5.63	2.86	1.11	64.80	31.23
ID	144	0.18	0.00	0.00	13.19	86.81
IL	7,158	8.80	5.21	1.59	37.18	56.02
IN	1,300	1.60	0.23	0.08	11.38	88.31
KS	4,113	5.06	9.43	0.90	68.08	21.59
KY	2,279	2.80	4.12	0.44	7.24	88.20
LA	1,590	1.95	1.38	0.00	4.53	94.09
MA	1,474	1.81	0.20	0.34	1.22	98.24
MD	595	0.73	0.00	0.17	2.02	97.82
ME	175	0.22	0.57	0.00	2.29	97.14
MI	1,475	1.81	1.36	2.51	12.54	83.59
MN	5,276	6.48	5.71	0.80	65.01	28.49
MO	3,803	4.67	19.98	3.60	40.92	35.50
MS	967	1.19	4.24	2.07	21.10	72.60
MT	856	1.05	31.54	2.69	42.41	23.36
NC	650	0.80	0.00	0.31	0.31	99.38
ND	1,139	1.40	48.90	3.07	31.26	16.77
NE	2,958	3.64	2.40	0.34	83.27	14.00
NH	199	0.24	0.00	1.01	0.00	98.99
NJ	720	0.88	0.14	0.14	7.22	92.50

(Table 2, Panel C continues on the next page.)

TABLE 2 – Sample Summary, Continued
Panel C: Assurance Group by State

	Total		No Assurance Group	Compilation and Review Group	Director's Exam Group	Audit Group
State	**#**	**%**	**%**	**%**	**%**	**%**
NM	520	0.64	1.92	0.58	9.62	87.88
NV	206	0.25	0.49	0.49	4.37	94.66
NY	999	1.23	0.70	0.40	14.51	84.38
OH	2,039	2.51	4.02	2.70	18.78	74.50
OK	3,125	3.84	3.36	0.67	70.37	25.60
OR	315	0.39	2.22	1.59	1.59	94.60
PA	1,781	2.19	0.90	0.11	3.76	95.23
RI	24	0.03	0.00	0.00	0.00	100.00
SC	704	0.87	2.56	0.28	9.52	87.64
SD	917	1.13	40.24	4.91	30.21	24.65
TN	1,998	2.46	0.35	0.25	5.71	93.69
TX	7,188	8.84	4.17	1.46	23.25	71.12
UT	371	0.46	2.70	0.54	9.97	86.79
VA	962	1.18	0.94	0.31	2.08	96.67
VT	155	0.19	0.00	7.74	0.00	92.26
WA	721	0.89	5.13	4.44	9.15	81.28
WI	3,181	3.91	16.82	5.82	43.85	33.51
WV	736	0.90	0.00	0.00	0.41	99.59
WY	472	0.58	14.62	1.27	26.27	57.84
Total	81,358	100.00				

TABLE 2 - Sample Summary, Continued
Panel D: Assurance Group by Federal Reserve District

Federal Reserve District		Total		No Assurance Group	Compilation and Review Group	Director's Exam Group	Audit Group
		#	%	%	%	%	%
1	Boston	2,290	2.81	0.17	0.87	0.96	97.99
2	New York	1,584	1.95	0.51	0.32	12.44	86.74
3	Philadelphia	1,679	2.06	0.95	0.12	2.56	96.37
4	Cleveland	3,455	4.25	2.95	1.65	12.36	83.04
5	Richmond	3,645	4.48	0.77	0.22	2.85	96.16
6	Atlanta	10,057	12.36	0.34	0.46	8.57	90.63
7	Chicago	14,441	17.75	5.92	1.95	40.34	51.80
8	St Louis	8,571	10.53	8.05	1.87	29.16	60.93
9	Minneapolis	9,297	11.43	17.11	2.02	54.67	26.19
10	Kansas City	13,924	17.11	7.20	1.18	63.32	28.30
11	Dallas	8,067	9.92	4.00	1.30	21.73	72.96
12	San Francisco	4,348	5.34	1.77	1.03	4.00	93.19
Total		81,358	100.00				

TABLE 3 - Descriptive Statistics

N=81,358

Variable Name	Mean	SD	Min	25%	50%	75%	Max
Audit	0.6114	0.4874	0	0	1	1	1
IC_Exam	0.3172	0.4654	0	0	0	1	1
Review_Comp	0.0133	0.1145	0	0	0	0	1
FirstTimeAudit	0.0147	0.1203	0	0	0	0	1
DLLP	0.0000	0.0039	-0.0480	-0.0014	-0.0001	0.0011	0.0601
JMBE	0.0579	0.2335	0.0000	0.0000	0.0000	0.0000	1.0000
Loss_Avoid	0.0326	0.1776	0.0000	0.0000	0.0000	0.0000	1.0000
Size	132647	107600	2074	51405	98122	183499	499928
Age	69.7787	41.4640	2	27	81	103	143
Loans	0.6282	0.1535	0.1904	0.5351	0.6473	0.7417	0.9059
Deposits	0.8375	0.0687	0.5476	0.8079	0.8529	0.8860	0.9283
Employees	41	38	1	16	30	54	1350
Leverage	0.1078	0.0392	-0.0906	0.0845	0.0987	0.1204	0.9482
Assur_Lvl	7.2869	2.0363	1	6	8	9	9
Tier1	0.1465	0.0839	0.0000	0.1062	0.1341	0.1781	0.4730
ΔTier1	0.0109	0.0553	-0.1821	-0.0066	0.0002	0.0118	0.2476
NPL	0.0094	0.0130	0.0000	0.0013	0.0049	0.0120	0.0737
LLP	0.0049	0.0077	-0.0028	0.0008	0.0025	0.0054	0.0482
ChargeOff	0.0029	0.0049	0.0000	0.0003	0.0012	0.0032	0.0294
ROA	0.0100	0.0111	-0.0389	0.0063	0.0117	0.0163	0.0317
Loss	0.1069	0.3090	0	0	0	0	1
LoantoDep	0.7563	0.1949	0.2466	0.6329	0.7695	0.8899	1.2129
LoanDepIntRatio	3.1610	1.8992	0.8701	1.9520	2.6134	3.7133	11.8462
Het_Loans	0.7668	0.1321	0.3338	0.6952	0.7850	0.8604	0.9911
LoanC	0.1461	0.0982	0.0000	0.0770	0.1270	0.1934	0.5014
LoanR	0.6600	0.1918	0.1365	0.5365	0.6863	0.8038	0.9886
LoanA	0.0868	0.1336	0.0000	0.0000	0.0183	0.1232	0.5812
LoanI	0.0892	0.0820	0.0004	0.0308	0.0661	0.1213	0.4244
ΔCashFlows	0.0008	0.0090	-0.9798	-0.0015	0.0008	0.0032	0.2313
ΔROA	0.0002	0.0083	-0.0327	-0.0025	0.0000	0.0026	0.0341
ΔLoans	0.1110	0.2748	-0.2258	-0.0107	0.0564	0.1406	1.9097
ΔDeposits	0.1064	0.2388	-0.1732	0.0029	0.0540	0.1241	1.6637
ΔHetLoans	-0.0031	0.0879	-0.3526	-0.0224	0.0036	0.0285	0.3149

Note: Descriptive statistics are calculated based on 81,358 bank-years representing 8,878 individual banks over the period 2000-2012. Definitions of all variables are provided in Appendix B

TABLE 4 - Differences in Assurance Level Groups

Panel A: Director's Exam and Audit

	Director's Exam **(N=25,806)**	***Audit*** **(N=49,740)**	**Test of Differences**
Variable Name	**Mean**	**Mean**	**MeanDiff**
DLLP	0.0000	0.0000	***
JMBE	0.0620	0.0560	***
Loss_Avoid	0.0270	0.0360	***
Size	85000	160000	***
Age	85.0850	60.2050	***
Loans	0.6080	0.6410	***
Deposits	0.8450	0.8330	***
Employees	0.1100	0.1060	***
Leverage	0.7210	0.7780	***
Tier1	0.1530	0.1420	***
ΔTier1	0.0140	0.0090	***
NPL	0.0080	0.0100	***
LLP	0.0040	0.0050	***
ChargeOff	0.0000	0.0010	***
ROA	0.0120	0.0090	***
Loss	0.0590	0.1350	***
LoantoDep	26.5490	49.8210	***
LoanDepIntRatio	0.0030	0.0030	***
Het_Loans	0.7550	0.7730	***
LoanC	0.1470	0.1460	
LoanR	0.5790	0.7110	***
LoanA	0.1560	0.0430	***
LoanI	0.1010	0.0830	***
ΔCashFlows	3.0820	3.1950	***
ΔROA	0.0000	0.0010	***
ΔLoans	0.0640	0.1410	***
ΔDeposits	0.0640	0.1330	***
ΔHetLoans	-0.0050	-0.0020	***

TABLE 4 - Differences in Assurance Level Groups
Panel B: Compilation and Review and Director's Exam

	***Compilation and Review* (N=1081)**	***Director's Exam* (N=25,806)**	**Test of Differences**
Variable Name	**Mean**	**Mean**	**MeanDiff**
DLLP	0.0000	0.0000	
JMBE	0.0660	0.0620	
Loss_Avoid	0.0210	0.0270	
Size	110000	85000	***
Age	79.6890	85.0850	***
Loans	0.6330	0.6080	***
Deposits	0.8450	0.8450	
Employees	0.1070	0.1100	**
Leverage	0.7510	0.7210	***
Tier1	0.1500	0.1530	
ΔTier1	0.0080	0.0140	***
NPL	0.0110	0.0080	***
LLP	0.0050	0.0040	***
ChargeOff	0.0000	0.0000	*
ROA	0.0100	0.0120	***
Loss	0.0970	0.0590	***
LoantoDep	33.4110	26.5490	***
LoanDepIntRatio	0.0030	0.0030	***
Het_Loans	0.7690	0.7550	***
LoanC	0.1430	0.1470	
LoanR	0.6430	0.5790	***
LoanA	0.1090	0.1560	***
LoanI	0.0850	0.1010	***
ΔCashFlows	3.3240	3.0820	***
ΔROA	-0.0010	0.0000	**
ΔLoans	0.0750	0.0640	**
ΔDeposits	0.0770	0.0640	***
ΔHetLoans	0.0010	-0.0050	**

Note: This table presents comparisons of the means for bank-year observations that fall into different assurance groups. Columns (1) and (2) compare the means of the Compilation and Review group (Comp_Review=1) to those of the Directors' Examination group (IC_Exam=1). The p-value is from a test of difference in means between the two groups.

TABLE 4 - Differences in Assurance Level Groups
Panel C: No Assurance and Compilation and Review

	No Assurance (N=4,731)	*Compilation and Review* (N=1,081)	Test of Differences
Variable Name	**Mean**	**Mean**	**MeanDiff**
DLLP	0.0000	0.0000	
JMBE	0.0590	0.0660	
Loss_Avoid	0.0260	0.0210	
Size	90000	110000	***
Age	84.6740	79.6890	***
Loans	0.6070	0.6330	***
Deposits	0.8460	0.8450	
Employees	0.1130	0.1070	***
Leverage	0.7170	0.7510	***
Tier1	0.1590	0.1500	***
ΔTier1	0.0120	0.0080	**
NPL	0.0090	0.0110	***
LLP	0.0040	0.0050	***
ChargeOff	0.0000	0.0000	
ROA	0.0110	0.0100	***
Loss	0.0780	0.0970	**
LoantoDep	27.1410	33.4110	***
LoanDepIntRatio	0.0030	0.0030	***
Het_Loans	0.7590	0.7690	**
LoanC	0.1440	0.1430	
LoanR	0.5690	0.6430	***
LoanA	0.1700	0.1090	***
LoanI	0.0960	0.0850	***
ΔCashFlows	3.1940	3.3240	**
ΔROA	-0.0010	-0.0010	
ΔLoans	0.0620	0.0750	**
ΔDeposits	0.0630	0.0770	***
ΔHetLoans	-0.0040	0.0010	*

Note: This table presents comparisons of the means for bank-year observations that fall into different assurance groups. Columns (1) and (2) compare the means of the No Assurance group to those of the Compilation and Review group (Comp_Review=1). The p-value is from a test of difference in means between the two groups.

TABLE 5 - Determinants of Level of Assurance

	None=0, Review, Directors Exam, Audit=1			*None, Review=0, Directors Exam, Audit=1*			*None, Review, Directors Exam=0, Audit=1*		
	coef	**p-value**		**coef**	**p-value**		**coef**	**p-value**	
Intercept	-5.338	0.000	***	-2.566	0.053	*	-17.753	0.000	***
Size	0.151	0.036	**	0.048	0.452		0.345	0.000	***
Age	0.000	0.631		0.000	0.931		-0.007	0.000	***
Loans	-5.710	0.001	***	-2.616	0.078	*	-3.843	0.017	**
Deposits	3.175	0.025	**	0.702	0.576		2.698	0.039	**
Employees	-0.075	0.339		-0.101	0.148		0.225	0.000	***
Leverage	0.332	0.734		-0.047	0.960		4.173	0.000	***
Assur_Group	2.011	0.000	***	2.017	0.000	***	4.390	0.000	***
Tier1	-0.078	0.742		-0.078	0.742		-0.078	0.742	
ΔTier1	1.202	0.001	***	1.202	0.001	***	1.202	0.001	***
NPL	-4.185	0.000	***	-4.185	0.000	***	-4.185	0.000	***
LLP	4.412	0.178		4.412	0.178		4.412	0.178	
ChargeOffs	-8.723	0.079	*	-8.723	0.079	*	-8.723	0.079	*
ROA	-14.066	0.000	***	-8.596	0.007	**	-15.547	0.000	***
Loss	-0.171	0.131		-0.088	0.412		0.221	0.006	**
LoantoDep	4.736	0.001	**	2.116	0.087	*	3.149	0.020	**
LoanDepIntRatio	-0.011	0.152		-0.011	0.152		-0.011	0.152	
HetLoans	0.333	0.135		0.333	0.135		0.333	0.135	

(Table 5 is continued on the next page)

TABLE 5 - Determinants of Level of Assurance (Cont.)

	None=0, Review, Directors Exam, Audit=1			***None, Review=0, Directors Exam, Audit=1***			***None, Review, Directors Exam=0, Audit=1***		
	coef	**p-value**		**coef**	**p-value**		**coef**	**p-value**	
LoanC	0.069	0.839		0.069	0.839		0.069	0.839	
LoanR	0.209	0.509		0.209	0.509		0.209	0.509	
LoanA	-0.249	0.497		0.100	0.784		-1.506	0.000	***
LoanI	1.058	0.004	**	1.058	0.004	**	1.058	0.004	**
ΔCashFlows	2.369	0.663		2.369	0.663		2.369	0.663	
ΔLoans	0.386	0.010	**	0.445	0.001	**	1.019	0.000	***
ΔDeposits	0.683	0.000	***	0.683	0.000	***	0.683	0.000	***
N	68,773			68,773			68,773		
State FE	Included			Included			Included		
Year FE	Included			Included			Included		
FedDistrict FE	Included			Included			Included		
Pseudo R2	0.553			0.553			0.553		

Note: I estimate the model using a partial proportion odds model with robust standard errors clustered by bank. All independent variables are measured at year t-1. All variables are defined in Appendix B. All continuous variables have been winsorized at the 1% and 99% level. P-values are two-tailed. *** p<0.010, ** p<0.05, * p<0.10

TABLE 6 - Level of Assurance and Financial Reporting Quality

		Discretionary Loan Loss Provision			***Just Meet or Beat Prior Year Earnings***			***Loss Avoidance***		
	Pred	**coef**	**p-value**		**coef**	**p-value**		**coef**	**p-value**	
Intercept	?	-0.310	0.000	***	-2.867	0.001	***	-3.318	0.000	***
Audit	**-**	-0.133	**0.000**	*******	**-0.753**	**0.032**	******	**-0.834**	**0.077**	*****
IC_Exam	**-**	-0.056	**0.000**	*******	**-0.507**	**0.028**	******	**-0.194**	**0.307**	
Review_Comp	**-**	-0.000	**0.034**	******	**0.054**	**0.414**		**-0.293**	**0.234**	
Size	?	-0.017	0.000	***	0.081	0.012	**	0.282	0.000	***
Leverage	?	-0.568	0.006	***	-1.199	0.187		-3.199	0.003	***
Lag_Assur_Lvl	-	0.015	0.000	***	0.111	0.022		0.091	0.122	
Δ Assur_Lvl	?	0.017	0.000	***	0.129	0.011	**	0.113	0.073	*
Tier1	?	-0.487	0.000	***	-0.690	0.132		0.381	0.290	
Δ Tier 1	?	-0.262	0.041	**	-0.952	0.211		4.065	0.000	***
NPL	-	-8.120	0.000	***	-17.890	0.000	***	-10.068	0.000	***
LLP	?	89.233	0.000	***	-103.707	0.000	***	-56.428	0.000	***
ROA	-	-2.892	0.000	***	153.501	0.000	***	-18.353	0.000	***
Het_Loans	-	0.352	0.000	***	-0.739	0.013	**	-1.056	0.007	***

(Table 7 is continued on the next page)

TABLE 6 - Level of Assurance and Financial Reporting Quality (Cont.)

	Pred	*Discretionary Loan Loss Provision* coef	p-value		*Just Meet or Beat Prior Year Earnings* coef	p-value		*Loss Avoidance* coef	p-value	
LoanC	-	-0.351	0.000	***	-0.809	0.033	**	-1.463	0.002	***
Δ CashFlows	?	2.768	0.000	***	148.194	0.000	***	53.777	0.000	***
Δ Loans	+	0.072	0.000	***	0.068	0.398		-0.686	0.000	***
Δ Dep	+	0.013	0.255		-0.511	0.038	**	0.375	0.031	**
Number of observations		81,358			36,644			10,941		
Year FE		Included			Included			Included		
FedDistrict FE		Included			Included			Included		
State FE		Included			Included			Included		
Adjusted R2		0.857								
Area under the ROC Curve					0.836			0.726		
F-Test										
Audit=IC_Exam		***			***			***		
IC_Exam=Review_Comp		**			***			NS		
Audit=Review_Comp		***			***			***		

Note: I estimate model (1) (models (2) and (3)) using ordinary least squares (logistic) regression with robust standard errors clustered by bank (Peterson 2009). All variables are defined in Appendix B. For ease of interpretation, all coefficients in the DLLP model have been multiplied by 100. All continuous variables have been winsorized at the 1% and 99% level. P-values are one-tailed. *** p<0.010, ** p<0.05, * p<0.10

TABLE 7 - Assurance in Single Bank and Multibank Bank Holding Companies

	Obs	%	% No Assurance	% Review/ Comp	% Directors Exam	% Audit
Single Bank BHC	68,073	83.67	6.05	1.40	32.30	60.24
Multibank BHC						
Same Assurance	10,432	12.82	2.69	0.40	25.37	71.53
Differing Assurance	2,853	3.51	11.60	2.91	40.97	44.51
Total	81,358	100.00				

TABLE 8 - Determinants of Level of Assurance No Multi-bank BHCs

	None=0, Review, Directors Exam, Audit=1			*None, Review=0, Directors Exam, Audit=1*			*None, Review, Directors Exam=0, Audit=1*		
	coef	**p-value**		**coef**	**p-value**		**coef**	**p-value**	
Intercept	-5.892	0.000	***	-3.305	0.018	**	-17.452	0.000	***
Size	0.175	0.022	**	0.058	0.382		0.308	0.000	***
Age	-0.002	0.118		0.000	0.975		-0.008	0.000	***
Loans	-5.423	0.003	**	-2.819	0.075	*	-3.662	0.033	**
Deposits	3.408	0.018	**	1.122	0.393		2.664	0.056	*
Employees	-0.080	0.336		-0.092	0.203		0.292	0.000	***
Leverage	0.465	0.650		0.115	0.910		4.833	0.000	***
Assur_Group	1.978	0.000	***	1.994	0.000	***	4.307	0.000	***
Tier1	0.302	0.225		0.302	0.225		0.302	0.225	
ΔTier1	1.469	0.000	***	1.469	0.000	***	1.469	0.000	***
NPL	-3.478	0.007	**	-3.478	0.007	**	-3.478	0.007	**
LLP	4.940	0.167		4.940	0.167		4.940	0.167	
ChargeOffs	-10.670	0.044	**	-10.670	0.044	**	-10.670	0.044	**
ROA	-19.541	0.000	***	-13.384	0.000	***	-20.919	0.000	***
Loss	-0.205	0.097	*	-0.085	0.474		0.191	0.026	**
LoantoDep	4.589	0.002	**	2.412	0.066	*	2.873	0.047	**
LoanDepIntRatio	-0.006	0.460		-0.006	0.460		-0.006	0.460	
HetLoans	0.369	0.119		0.369	0.119		0.369	0.119	

(Table 10 is continued on the next page)

TABLE 8- Determinants of Level of Assurance No Multi-bank BHCs (Cont.)

	None=0, Review, Directors Exam, Audit=1			***None, Review=0, Directors Exam, Audit=1***			***None, Review, Directors Exam=0, Audit=1***		
	coef	**p-value**		**coef**	**p-value**		**coef**	**p-value**	
LoanC	0.075	0.842		0.075	0.842		0.075	0.842	
LoanR	0.306	0.373		0.306	0.373		0.306	0.373	
LoanA	-0.060	0.879		0.315	0.421		-1.451	0.000	***
LoanI	1.217	0.003	**	1.217	0.003	**	1.217	0.003	**
ΔCashFlows	3.894	0.505		3.894	0.505		3.894	0.505	
ΔLoans	0.921	0.000	***	0.921	0.000	***	0.921	0.000	***
ΔDeposits	0.270	0.186		0.232	0.216		1.005	0.000	***
N	56,748			56,748			56,748		
State FE	Included			Included			Included		
Year FE	Included			Included			Included		
FedDistrict FE	Included			Included			Included		
Pseudo R2	0.548			0.548			0.548		

Note: I estimate the model using a partial proportion odds model with robust standard errors clustered by bank (Peterson 2009). All independent variables are measured at year t-1. All variables are defined in Appendix B. All continuous variables have been winsorized at the 1% and 99% level. P-values are two-tailed. *** p<0.010, ** p<0.05, * p<0.10

TABLE 9 – Just Meet or Beat Prior Year Earnings Threshold Sensitivity

		Just Meet or Beat 1 Bin Width			***Just Meet or Beat 2 Bin Widths***			***Just Meet or Beat 3 Bin Widths***		
	Pred	**coef**	**p-value**		**coef**	**p-value**		**coef**	**p-value**	
Intercept	?	-5.339	0.000	***	-3.116	0.000	***	-2.759	0.000	***
Audit	**-**	**-2.126**	**0.002**	****	**-1.294**	**0.006**	****	**-0.932**	**0.018**	****
IC_Exam	**-**	**-1.407**	**0.002**	****	**-0.869**	**0.005**	****	**-0.630**	**0.015**	****
Review_Comp	**-**	**-0.189**	**0.320**		**-0.031**	**0.461**		**0.020**	**0.471**	
Size	?	0.195	0.001	***	0.157	0.000	***	0.167	0.000	***
Leverage	?	-1.222	0.288		-5.494	0.001	***	-6.105	0.000	***
Lag_Assur_Lvl	-	0.282	0.002	**	0.176	0.007	**	0.115	0.029	**
Δ Assur_Lvl	?	0.259	0.005	**	0.202	0.002	**	0.135	0.014	**
Tier1	?	-0.409	0.360		0.673	0.219		1.161	0.063	*
Δ Tier 1	?	-0.621	0.371		0.235	0.439		0.557	0.337	
NPL	-	-12.517	0.017	**	-4.959	0.134		-5.312	0.082	*
LLP	?	-70.929	0.000	***	-88.928	0.000	***	-81.517	0.000	***
Het_Loans	-	-0.988	0.025	**	-0.968	0.006	**	-0.771	0.014	**
LoanC	-	-1.233	0.037	**	-1.043	0.023	**	-0.967	0.020	**
Δ ROA	-	110.944	0.000	***	127.723	0.000	***	137.848	0.000	***
Δ CashFlows	?	83.747	0.000	***	103.178	0.000	***	108.899	0.000	***
Δ Loans	+	0.154	0.345		-0.076	0.409		0.075	0.395	
Δ Dep	+	-1.250	0.003	**	-0.695	0.028	**	-0.815	0.006	**
Δ Het_Loans	?	-0.118	0.426		-0.016	0.487		0.275	0.261	
N		31,269			31,585			31,585		
Year FE		Included			Included			Included		
FedDistrict FE		Included			Included			Included		
State FE		Included			Included			Included		
Area under the ROC Curve		0.798			0.813			0.824		

TABLE 9 – Just Meet or Beat Prior Year Earnings Threshold Sensitivity (Cont.)

F-Test			
Audit=IC_Exam	***	**	**
IC_Exam=Review_Comp	***	***	***
Audit=Review_Comp	**	***	***

Note: I estimate the models using logistic regression with robust standard errors clustered by bank (Peterson 2009). All variables are defined in Appendix B. All continuous variables have been winsorized at the 1% and 99% level. P-values are one-tailed. *** p<0.010, ** p<0.05, * p<0.10

TABLE 10 - Loss Avoidance Threshold Sensitivity

		Loss Avoidance 1 Bin Width			***Loss Avoidance 2 Bin Widths***			***Loss Avoidance 3 Bin Widths***		
	Prediction	**coef**	**p-value**		**coef**	**p-value**		**coef**	**p-value**	
Intercept	?	-5.415	0.000	***	-4.231	0.000	***	-3.435	0.000	***
Audit	**-**	**-0.947**	**0.161**		**-1.238**	**0.056**	*****	**-0.917**	**0.082**	*****
IC_Exam	**-**	**-0.340**	**0.299**		**-0.531**	**0.153**		**-0.391**	**0.184**	
Review_Comp	**-**	**-0.813**	**0.159**		**-0.471**	**0.204**		**-0.369**	**0.203**	
Size	?	0.205	0.008	**	0.218	0.000	***	0.270	0.000	***
Leverage	?	-2.062	0.114		-2.550	0.040	**	-2.630	0.019	**
Lag_Assur_Lvl	-	0.129	0.161		0.147	0.080	*	0.091	0.153	
Δ Assur_Lvl	?	0.100	0.214		0.124	0.116		0.088	0.158	
Tier1	?	0.602	0.277		0.558	0.260		0.257	0.363	
Δ Tier 1	?	3.384	0.004	**	3.658	0.000	***	3.649	0.000	***
NPL	-	-10.899	0.007	**	-11.693	0.000	***	-8.828	0.000	***
LLP	?	-56.682	0.000	***	-57.974	0.000	***	-60.698	0.000	***
Het_Loans	-	0.324	0.319		-0.379	0.225		-0.860	0.029	**
LoanC	-	-0.794	0.166		-0.958	0.054	*	-1.107	0.018	**
Δ ROA	-	-16.041	0.017	**	-15.506	0.003	**	-17.990	0.000	***
Δ CashFlows	?	37.880	0.000	***	47.449	0.000	***	53.071	0.000	***
Δ Loans	+	-0.617	0.014	**	-0.687	0.001	***	-0.761	0.000	***
Δ Dep	+	0.436	0.093	*	0.377	0.071	*	0.440	0.026	**
Δ Het_Loans	?	-1.243	0.029	**	-0.435	0.204		-0.443	0.150	
Number of observations		10,870			10,909			10,918		
Year FE		Included			Included			Included		
FedDistrict FE		Included			Included			Included		
State FE		Included			Included			Included		
Area under the ROC Curve		0.730			0.730			0.726		

TABLE 10 - Loss Avoidance Threshold Sensitivity (Cont.)

F-Test			
Audit=IC_Exam	*	**	**
IC_Exam=Review_Comp	NS	NS	NS
Audit=Review_Comp	NS	NS	NS

Note: I estimate the models using logistic regression with robust standard errors clustered by bank (Peterson 2009). All variables are defined in Appendix B. All continuous variables have been winsorized at the 1% and 99% level. P-values are one-tailed. *** p<0.010, ** p<0.05, * p<0.10

TABLE 11 - Just Meet or Beat Excluding Banks with Large Negative Changes in Earnings

		Just Meet or Beat Prior Year Earnings		
	Prediction	**coef**	**p-value**	
Intercept	?	-2.924	0.000	***
Audit	**-**	**-1.140**	**0.012**	****
IC_Exam	**-**	**-0.793**	**0.008**	****
Review_Comp	**-**	**-0.012**	**0.484**	
Size	?	0.142	0.001	**
Leverage	?	-6.250	0.000	***
Lag_Assur_Lvl	-	0.144	0.019	**
Δ Assur_Lvl	?	0.177	0.006	**
Tier1	?	1.853	0.018	**
Δ Tier 1	?	-0.783	0.304	
NPL	-	-5.989	0.078	*
LLP	?	-74.631	0.000	***
Het_Loans	-	-0.963	0.006	**
LoanC	-	-1.187	0.010	**
Δ ROA	-	117.007	0.000	***
Δ CashFlows	?	88.412	0.000	***
Δ Loans	+	0.093	0.386	
Δ Dep	+	-0.708	0.024	**
Δ Het_Loans	?	-0.020	0.484	
Number of observations		25,963		
Year FE		Included		
FedDistrict FE		Included		
State FE		Included		
Area under the ROC Curve		0.770		
F-Test				
Audit=IC_Exam		**		
IC_Exam=Review_Comp		***		
Audit=Review_Comp		**		

Note: I estimate the model using logistic regression with robust standard errors clustered by bank (Peterson 2009). All variables are defined in Appendix B. All continuous variables have been winsorized at the 1% and 99% level. P-values are one-tailed. *** p<0.010, ** p<0.05, * p<0.10

TABLE 12 - Loss Avoidance Excluding Banks with Large Losses

		Loss Avoidance		
	Prediction	**coef**	**p-value**	
Intercept	?	-1.628	0.025	**
Audit	**-**	**-0.317**	**0.038**	****
IC_Exam	**-**	**-0.031**	**0.041**	****
Review_Comp	**-**	**-0.120**	**0.208**	
Size	?	0.086	0.049	**
Leverage	?	-0.983	0.228	
Lag_Assur_Lvl	-	0.031	0.346	
Δ Assur_Lvl	?	0.066	0.200	
Tier1	?	0.668	0.213	
Δ Tier 1	?	3.618	0.000	***
NPL	-	-9.527	0.000	***
LLP	?	-51.744	0.000	***
Het_Loans	-	-0.522	0.120	
LoanC	-	-1.031	0.024	**
Δ ROA	-	-21.138	0.000	***
Δ CashFlows	?	38.907	0.000	***
Δ Loans	+	-0.259	0.098	*
Δ Dep	+	0.361	0.064	*
Δ Het_Loans	?	-0.252	0.274	
Number of observations		7,398		
Year FE		Included		
FedDistrict FE		Included		
State FE		Included		
Area under the ROC Curve		0.726		
F-Test				
Audit=IC_Exam		***		
IC_Exam=Review_Comp		**		
Audit=Review_Comp		**		

Note: I estimate the model using logistic regression with robust standard errors clustered by bank (Peterson 2009). All variables are defined in Appendix B. All continuous variables have been winsorized at the 1% and 99% level. P-values are one-tailed. *** p<0.010, ** p<0.05, * p<0.10

TABLE 13 - Level of Assurance and Financial Reporting Quality Dropping Prior Year Assurance Variables

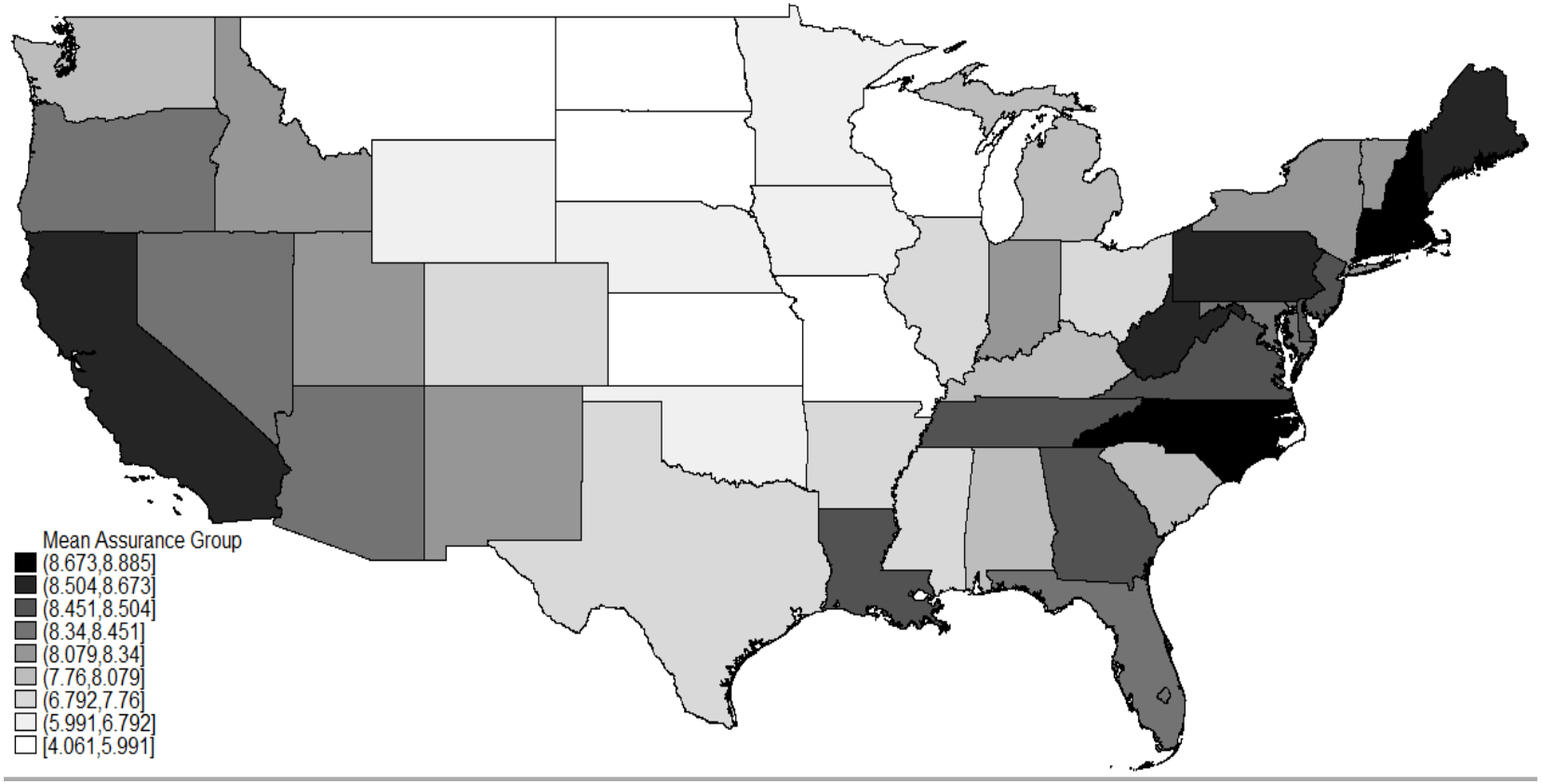
		Discretionary Loan Loss Provision			***Just Meet or Beat Prior Year Earnings***			***Loss Avoidance***		
	Pred	**coef**	**p-value**		**coef**	**p-value**		**coef**	**p-value**	
Intercept	?	-0.560	0.000	***	-2.903	0.000	***	-3.101	0.000	***
Audit	-	**-0.021**	**0.000**	***	**-1.125**	**0.013**	**	**-0.053**	**0.056**	*
IC_Exam	-	**-0.004**	**0.000**	***	**-0.778**	**0.010**	**	**0.291**	**0.396**	
Review_Comp	-	**-0.006**	**0.034**	**	**-0.015**	**0.480**		**-0.051**	**0.445**	
Size	?	-0.018	0.000	***	0.151	0.001	***	0.275	0.000	***
Leverage	?	-0.564	0.006	***	-5.444	0.001	***	-3.172	0.003	**
Tier1	?	-0.481	0.000	***	0.741	0.190		0.423	0.269	
Δ Tier 1	?	-0.263	0.041	**	-0.192	0.449		4.011	0.000	***
NPL	-	-8.112	0.000	***	-4.984	0.122		-10.043	0.000	***
LLP	?	89.232	0.000	***	-81.793	0.000	***	-56.388	0.000	***
ROA	-	-2.896	0.000	***	127.225	0.000	***	-1.460	0.002	**
Het_Loans	-	0.352	0.000	***	-1.023	0.004	**	-18.378	0.000	***
LoanC	-	-0.351	0.000	***	-1.166	0.011	**	-1.062	0.007	**
Δ CashFlows	?	2.779	0.000	***	98.273	0.000	***	53.859	0.000	***
Δ Loans	+	0.073	0.000	***	0.049	0.438		-0.684	0.000	***
Δ Dep	+	0.013	0.255		-0.801	0.012	**	0.371	0.033	**
Δ Het_Loans	?	-0.029	0.093	*	0.003	0.497		-0.261	0.240	
Number of observations		81,358			36,644			10,941		
Year FE		Included			Included			Included		
FedDistrict FE		Included			Included			Included		
State FE		Included			Included			Included		
Adjusted R2		0.860								
Area under the ROC Curve					0.812			0.726		

TABLE 13 - Level of Assurance and Financial Reporting Quality Dropping Prior Year Assurance Variables (Cont.)

F-Test			
Audit=IC_Exam	***	**	***
IC_Exam=Review_Comp	**	***	NS
Audit=Review_Comp	***	***	NS

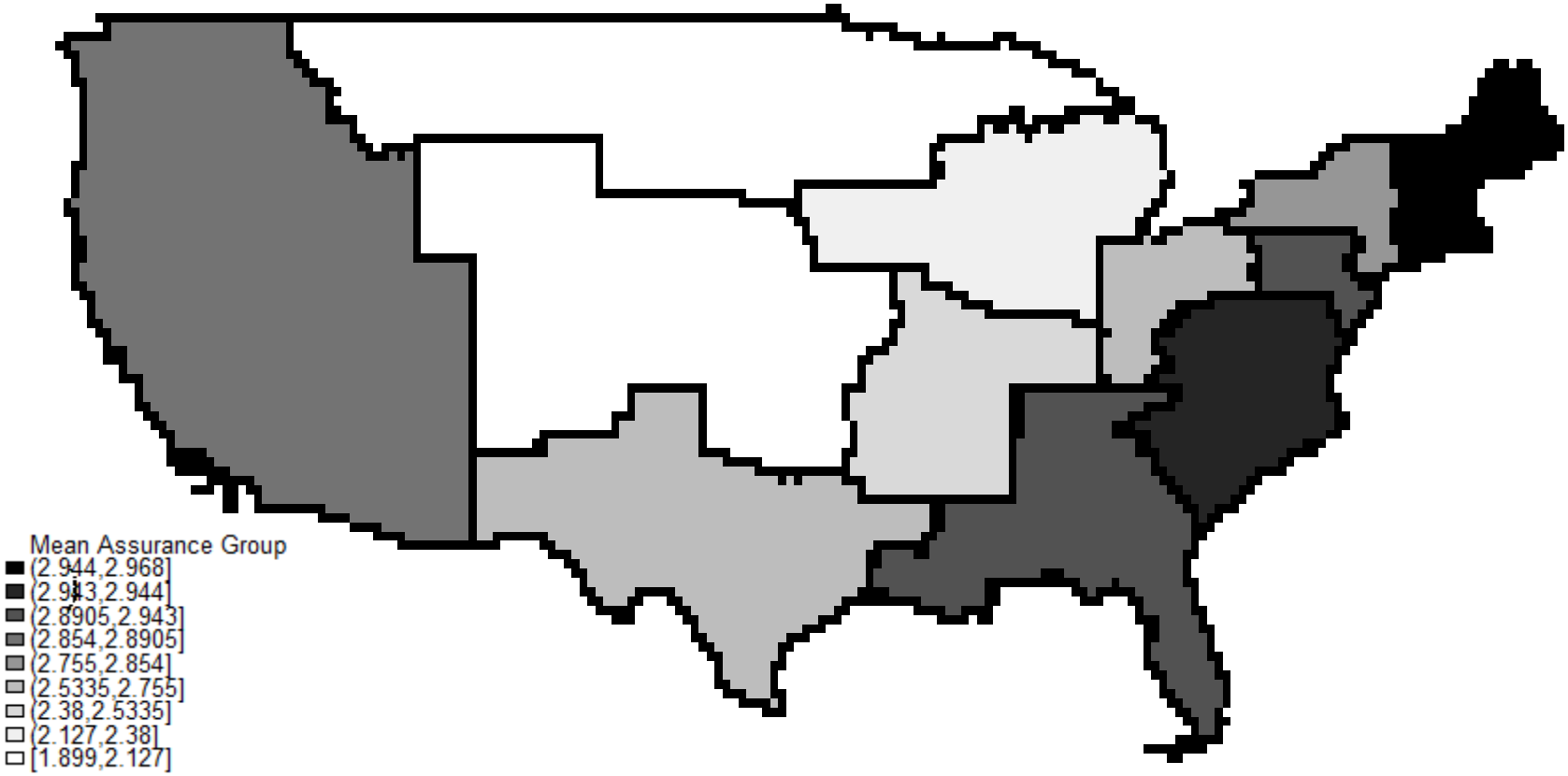
Note: I estimate model (1) (models (2) and (3)) using ordinary least squares (logistic) regression with robust standard errors clustered by bank. All variables are defined in Appendix A. All continuous variables have been winsorized at the 1% and 99% level. P-values are one-tailed. *** p<0.010, ** p<0.05, * p<0.10

FIGURE 1 - Mean Assurance Level by State



Map illustrating the mean assurance level by US state from 2000 through 2012. Darker shades indicate higher levels of assurance. The map was generated using the STATA spmap command. I am grateful to the US National Weather Service for providing the shapefile.

FIGURE 2 - Mean Assurance Group by Federal Reserve District



Map illustrating the mean assurance level by US Federal Reserve District from 2000 through 2012. Darker shades indicate higher levels of assurance. The map was generated using the STATA spmap command. I am grateful to Keith Taylor at the St. Louis Federal Reserve Bank for providing the shapefile.